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Abstract N°: 81

Combination peeling therapy of 16.7% salicylic acid & 16.7% lactic acid in colloidion base : A indigenous cheaper alternative with wonderful results in inflammatory acne

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Introduction & Objectives:

Inflammatory acne is a common disorder of pilosebaceous units causing pronounced physical and psychological morbidity. Different chemical peeling agents are available with different cost effective benefits.

Objectives : This study was aimed to evaluate the efficacy and side effects of a cheaper formulation of salicylic acid and lactic acid in collodion base in inflammatory acne. This combination is used widely as a topical cauterising agent for verucca vulgaris..

Materials & Methods:

60 young patients with inflammatory acne were selected and a combination of 16.7% salicylic acid and 16.7% lactic acid in collodion base was applied every 21 days for 6-8 weeks. Severity of acne according to Michelsons acne severity index and side effects of treatment were documented on weeks 2,4,6 and 8. Oral Azithromycin 500mg for 3 consecutive days every week for 6 weeks was given along with 1% clindamycin gel self application by the patients during the intervals and photo protection was advised. The overall patient satisfaction rate was recorded at the end of study. Statistical analysis of the results was done by chi-square test and independent sample t-test as appropriate.

Results:

All patients showed a reduction in severity of acne. The mean total score was 53.9 at baseline and it showed a significant reduction of 41.6% after 2 weeks, 57.7% after 4 weeks and 73.3% after 8 weeks. Mild burning, erythema and exfoliation was seen in 31.6% of patients. There was a marked reduction in post inflammatory hyperpigmentation. The cost of therapy was very low as compared to other peeling agents.

Conclusion:

A cheaper agent like16.7% salicylic acid and 16.7% lactic acid in collodion base can be used as a safe and very cost effective modality of treatment for inflammatory acne.

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Abstract N°: 131

Effect of Fractional microneedling radiofrequency versus intralesional steroid injection with and without microneedling on tissue levels of PDGF and CTGF in hypertrophic scars: A randomized comparative clinical trial.

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Introduction & Objectives: Hypertrophic scarring is a fibroproliferative disorder that can cause severe functional and cosmetic deformities, and unfortunately is still lacking a reliable treatment method. Our objectives were to compare and assess the safety and reliability of fractional microneedling radiofrequency(FMR) versus intralesional corticosteroid injection(ILCS) followed or not by microneedling in hypertrophic scars treatment and their implication on connective tissue growth factor(CTGF) and platelet derived growth factor(PDGF) tissue levels.

Materials & Methods: The current study included 30 patients with hypertrophic scars. This is a randomized, controlled, comparative study. 5 treatment sessions, with 4 weeks in between, were done for each patient. In every patient, each of the two scars, or each side of a large scar was randomly allocated to treatment either by FMR (area A) (all 30 patients) or ILCS injection alone (in 15 patients) or ILCS combined with microneedling (in 15 patients) (area B). Bipolar FMR VIVACE machine was used in the current study using cartridges with 36 non-insulated microneedles. Triamcinolone acetonide was diluted with saline in concentration 1:2 (20 mg/ml) and injected using an insulin syringe along the scar. A handheld motorized microneedling device was used. A baseline evaluation was done before starting the treatment sessions, followed by another assessment 4 weeks after the last treatment session. A blinded certified dermatologist performed the assessments, and also patient observer scar assessment scale (POSAS) was done. A baseline evaluation of biochemical markers was done through a 3-mm punch biopsy which was obtained from each treatment area, and repeated after 4 weeks after the final session. Skin biopsy specimens were kept frozen until assayed. Polymerase Chain Reaction test (PCR) was used to measure tissue levels of PDGF and CTGF.

Results: Clinical assessments using POSAS scoring system showed significant reduction in mean values of PSAS and OSAS after treatment when compared to mean values before treatment within both areas A and B. Comparison between areas A and B regarding POSAS before or after treatment, showed no statistically significant difference ($p > 0.05$). Also, no statistically significant difference was found between areas B1 and B2 regarding POSAS before or after treatment ($p > 0.05$). Biochemical assessments revealed a significant decrease in after treatment mean values of CTGF and PDGF when compared to before treatment mean values within both treatment areas A and B, but we found a statistically significant difference between the two areas regarding CTGF and PDGF percentage of reduction($p < 0.05$) with higher percentage of reduction detected in area B. There was a significant reduction in after treatment mean values of tissue levels of both CTGF and PDGF when compared to before treatment mean values within both areas B1 and B2. There was no significant difference between areas B1 and B2. Most of cases didn't complain of any significant side effects.

Conclusion: FMR and ILCS, alone or combined with microneedling are effective in hypertrophic scars treatment. FMR is safe and efficient, especially in skin types III & IV hypertrophic scars, with low downtime and rapid healing.

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Abstract N°: 142

Meso-toxin in the mid-face: technique, applications and effects

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Introduction & Objectives:

The meso-toxin technique has been developed to reduce fine lines and improve skin texture with a series of small microdroplet injections. Precise injections of highly diluted botulinic neuroprotein, combined with low molecular weight hyaluronic acid, which acts as a viscosity modifier, into the deep dermis or in the superficial subdermal plane, are meant to target only superficial muscle fibers at the level of their insertion into dermis. This injection technique is less likely to lead to diffusion of neurotoxin into deep muscles and to cause undesired effects, allowing to treat areas that are generally avoided with on-label injection techniques, such as midface.

Materials & Methods:

Nineteen women aged 30 to 59 years with moderate to severe smile lines at maximum expression and in a stable medical condition were recruited. Typical exclusion criteria for botulinum neurotoxin and hyaluronic acid injections were fulfilled.

Results:

In this case report, we evaluated the efficacy and safety of injection of amino acids with HA and BTX. This report covers 19 patients, with a follow-up of three months.

In all treated patients there was clinical improvement of skin surface and texture, as well as attenuation of fine lines, with preserved natural facial mimetic activity.

In 2 patients, prone to rosacea, we've noticed improvement of erythema and flushing. 3 patients with oily skin, noticed decreased skin oiliness and pore size. Effects of meso-toxin appear after 2 weeks and last for up to 3 months.

There were no complications. Small dilution volumes allow more precise administration of the botulinum neuroprotein. This makes it possible to extensively treat the midface with no effect on the zygomaticus muscles, and therefore unwanted side effects, such as mid-face ptosis and uneven smile.

Conclusion:

Considering the review of literature, the proposed and applied technique and the results achieved, we believe that meso-toxin is a safe and effective method of combined use of botulinum neuroprotein with hyaluronic acid and amino acids in the mid-face.

Amino acid cluster with LMW HA bring about fibroblast chemotaxis migration into the injected area, stimulate collagen synthesis, thereby improving skin quality, increasing skin thickness and elasticity.

Meso-toxin inhibits release of vasodilating neuroproteins, while amino acids improve the quality of microcapillaries wall, leading to decreased erythema and flushing in rosacea-prone patients.

Meso-toxin interferes with cholinergic transmission between sebaceous glands and autonomic nerve terminals,

while hyaluronic acid hydrates the skin, leading to decreased skin oiliness and pore size.

The meso-toxin technique is a promising procedure that can be used in conjunction with standard injections.

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Abstract N°: 260

Epidermal melasma and multiple brown spots treated using topical retinoids, active agents and picosecond fractional laser treatment.

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Introduction & Objectives: Hyperpigmentation and melasma are common disturbances of pigmentation, with the later predominantly affecting women and people living in areas with intense sun exposure.

The objective of the protocol was to treat hyperpigmentation and melasma with a combination of topical treatments and laser sessions

Clinical case: Caucasian female 49 year-old patient, Fitzpatrick skin type III, living in a Mediterranean country presented with hyperpigmentation of the face. The initial clinical examination macroscopically revealed multiple pigmented brown macules and patches, distributed diffusely on the nose, forehead, upper lip, cheeks and chin, in areas forming a centrofacial pattern of patches and plaques.

In UV light examination using fotofinder, several brownish circumscribed lesions were identified, as well as larger areas of epidermal melasma and multiple freckles.

Materials & Methods:

- Materials
- Topical use of retinol 0,3%, tranexamic acid 1.8%, niacinamide 5%, H.E.P.E.S. 5% .
- Quanta Pico Laser.
- Fotofinder

Treatment duration : The protocol duration was 8 months, from October to May.

Procedure description

- topical treatment using cosmetic products; a serum containing 1.8% tranexamic acid, 5% niacinamide, 5% H.E.P.E.S. twice daily and 0.3% retinol cream once a day (evening).
- application of two Pico laser sessions, with 8-week interval, in the 2nd and 4th month of the treatment plan respectively (November, January). The first pico laser session took place one month after the initial diagnosis, to ensure sun exposure of the patient post-procedure would be minimized. In each session, KTP laser 532nm was applied to the pigmented patches, freckles in picosecond mode (spot 3mm, 1.1J, Hz 1). Also Fractional laser 1064 nm(OP mode, spot 5mm, 1,2J, Hz 4) was applied to all areas with melasma. After that , in the same session, light energy fractional picosecond Nd:YAG laser 1064 nm was then applied (spot 8mm, 0.25J, Hz 10) on the face to achieve a more even skin tone.

Patient experienced mild erythema for 1-3 days after each laser session, following mild flaking that resolved in 2-3 days. They were advised to avoid intense exposure to sunlight and use sunscreen with broad-spectrum coverage for at least one month after each laser session. It was recommended to avoid any strenuous physical activity for about 6-7 days post-session. Applying restorative cream was recommended twice daily, for at least 7-10 days post-session and the patient would resume to the above topical treatment protocol in 5-7 days, after redness and flaking subsided. No severe complications or common side effects such as hypopigmentation, satellite

pigmentation or local ochronosis, scarring, infection, usual to alternative melasma therapies were observed.

Results: By the end of the treatment plan, the clinical assessment revealed significant improvement, with a noticeable decrease in the number and color tone of the hyperpigmented lesions, as well as regression of epidermal melasma. In UV light examination, few hyperpigmented macules and patches remain, which will be reevaluated.

Conclusion: Topical treatment combined with a combination of fractional KTP pico second, Nd:YAG OP and fractional Nd:YAG laser picosecond, resulted in significant improvement of hyperpigmentation and melasma in female patient, with minimal need of compliance and no complications, illustrating that hyperpigmentation treatments can be optimized using non phenolic compounds and latest laser technology.

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Abstract N°: 473

ASIA syndrome provoked by HA filler

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Introduction & Objectives:

The autoimmune/inflammatory syndrome induced by adjuvants (ASIA) can be provoked by hyaluronic acid (HA), which belongs to substances meeting the criteria of adjuvants. Mechanisms of the innate and acquired immune response is activated, leading to the dysregulation of T and B lymphocytes, inability to recognize one's own antigens, inflammation, damage to one's own tissues, and ultimately to autoimmunity.

Materials & Methods:

A 64-year-old woman was administered HA product (Perfectha®) into her the zygomatic area, nasolabial folds, marionette lines, glabella, upper lip 3 years ago. After pharyngitis treated with amoxicillin and clavulanic acid, inflammatory tumors appeared at the sites of HA injections. The patient complained of general malaise, sore muscles and low-grade fever. The surgeon diagnosed abscesses, incised the lesions in the nasolabial folds and applied a surgical drain. Transparent crystal-like secretion, without purulent discharge was obtained and ordered clindamycin though culture for aerobic and anaerobic bacteria was negative. Despite the treatment, both local and general clinical symptoms persisted.

After admission she was diagnosed with Delayed Inflammatory Reaction. The treatment was administered: cloxacillin + metronidazole and prednisone 40 mg. Intralesional hyaluronidase 1500 U injections were administered for 3 days. Although the inflammation had subsided, solid nodules were still palpable and periodically swollen. The dose of prednisone was gradually lowered to 20 mg/d for 10 months but the symptoms recurred when the dose was lowered.

After one year of treatment with prednisone at a dose of 2.5 mg it was decided to terminate the treatment. Regrettably, the inflammation recurred on the third day at the sites of previous injections and after recurrence to 2.5 mg of prednisone once again, the lesions subsided. The treatment was ended after 1.5 years.

Results:

During this observation period, the patient developed symptoms that enabled the diagnosis of the ASIA syndrome: muscle weakness and pain, joint pain, feeling of chronic fatigue with sleep and memory disorders, positive antinuclear antibody titer 1:160 (immunoblotting test negative), elevated antithyroid antibodies (anti-TPO, anti-TG). Moreover, autoimmune thyroiditis was diagnosed.

Conclusion:

The ASIA syndrome following the implantation of bioimplants is still recognized too rarely. It is probably due to the lack of knowledge or diagnostic difficulties, because the symptoms are non-specific and there is no immune marker of this syndrome. Furthermore, it may develop several years after the procedure and it is difficult for both the patient and the physician to associate this relationship. With regards the presented case, the symptoms of the ASIA syndrome were detected early enough due to the ongoing DIR. Macrophages play a decisive role in both reactions. Like in Asia syndrome, presumably neither type I nor type IV hypersensitivity plays a role in DIR to

hyaluronic acid (HA) fillers, although intradermal skin testing with different brands of HA might result in positive skin tests, further obscuring the precise mechanism of these reactions. Potentially a similar pathophysiological mechanism of the reaction may explain the initiating role of DIR in the development of ASIA.

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Abstract N°: 542

Dynamic Anatomy: Shedding Light on Ultrasonography as a Teaching Tool for MD Codes–Guided Hyaluronic Acid Filler Injection

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Introduction & Objectives: Describe the value of applying ultrasonography (US) for teaching facial hyaluronic acid (HA) filler injections according to the MD Codes methodology, a constructed approach to facial assessment, treatment planning, anatomical location (eg, plane, depth), product selection, injection tool, and delivery and volume. The definition of specific in vivo US visuals ("anatomical windows") encompassing anatomical landmarks correlating to the MD Codes may help physicians better understand filler anatomy, identify danger zones, and correctly place filler product for safe and optimal aesthetic outcomes.*

MD Codes aims to standardize the evaluation and treatment of patients seeking improvement in facial aesthetics. Accurate differentiation of facial anatomical structures is important for safe and successful treatment, but injectors come from various training backgrounds and levels of anatomical knowledge and expertise. US enables clear visualization of facial soft-tissue anatomy (eg, facial layers and landmarks). A teaching approach of MD Codes, which utilizes US of specific anatomical windows, may help injectors from all backgrounds acquire necessary knowledge of filler anatomy.

Materials & Methods: Images and videos of volunteers demonstrating specific US views, visualized by different probe positions, were acquired using a Philips Affiniti 70 to map internal facial anatomical and vascular structures before and after HA injection into the zygomatic arch (MD Codes *Ck1)*, zygomatic eminence (*Ck2*), and anteromedial cheek (*Ck3*), avoiding danger zones. Patient photos were taken pre- and posttreatment. A teaching module was developed, including instruction on US image capture and interpretation, and presented to an international cohort of physician trainers and injectors.*

Results: The sonographic evidence of aesthetic treatment to the midface (foundation MD Codes) through HA filler injection helped audiences visualize internal facial soft-tissue anatomy (ie, tissues at different depths, blood vessels, danger zones). This approach enabled better understanding of the anatomical concepts and gave the audience practical tools for placing HA filler product in the correct facial compartment, layer, and depth, promoting safety by prevention of vascular-related complications and injuries to other structures as well as monitoring of posttreatment changes.

Conclusion: US is a noninvasive, safe, and convenient tool in facial aesthetics. US-enhanced training is a novel, innovative approach to help injectors visualize facial anatomical structures, correctly place HA filler product at the necessary location and depth, understand postinjection filler dynamics, and prevent potential complications for better, safer patient outcomes. Creating defined, sonographic views for teaching MD Codes facilitates a medical standard for better understanding facial anatomy and the interplay between the different structures of the aging face.

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Abstract N°: 599

Ex-vivo, Clinical and Bioinstrumental evaluation of an antioxidant face serum

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Introduction & Objectives:

Environmental factors, such as UV rays and pollution, generate free radicals that have an impact on skin aging. These free radicals induce damage in skin proteins, lipids and DNA. They are responsible for the accelerated deterioration of collagen and elastic fibers, as well as an impact on skin barrier and hydration. This leads to visible skin aging-related changes such as fine lines, wrinkles and dullness. Topically applied antioxidants may be an effective strategy to limit the consequences of free radical-induced premature skin aging. Therefore, the efficacy of a face serum containing a patent-pending antioxidant blend has been evaluated using human skin explants and in an in-vivo clinical study.

Materials & Methods:

Skin explants were treated with the test and placebo formulations for 7 days. The tissues were collected for qRT-PCR, and immunofluorescence staining. Additionally, the antioxidant capacity of the formula was evaluated using ozone-induced lipid peroxidation measurement (MDA).

In the IRB-approved in-vivo clinical study, 33 women ages 28 to 47 of phototypes I-IV were enrolled following the informed consent process. All subjects presented with fine lines and a lack of skin radiance on the face. The serum was applied 2 times a day to the entire face for 28 days. Efficacy was measured using bio-instrumentation (corneometry, trans-epidermal water loss - TEWL), image analysis (profilometry) and a clinical evaluation conducted by the investigating dermatologist (radiance, smoothness and safety evaluation). Subjects also completeda self-assessment questionnaire.

Results:

In the ex-vivo study, this antioxidant formulation causes a significant decrease of 52% in MDA (lipid peroxidation biomarker) generated by ozone, compared to a placebo formula. Additionally, it stimulates antioxidant genes (NFE2L2, TXNRD1) and skin barrier genes (TGM1, ELOVL1). A 7-day treatment of skin explants resulted in an increase of elastin fiber length by 40%, compared to untreated and placebo.

Compared to baseline in the in-vivo clinical study, skin smoothness improved, demonstrating a statistically significant increase (+37%) based on clinical scoring and confirmed by profilometry after 28 days of usage of the formula. Progressive statistical improvement on skin radiance was also observed (+22% at D28). Skin hydration strongly increased and TEWL values decreased within 8 hours after a single application. Additionally, improvements in hydration and TEWL were measured throughout the study, demonstrating a positive impact on skin barrier.

Conclusion:

In the ex-vivo study, this formulation showed improvement of skin antioxidant, barrier and elasticity-linked

biological targets. The in-vivo clinical data further demonstrated the benefits of the serum on skin barrier, skin microrelief, skin smoothness and skin radiance. Moreover, the formulation had excellent skin tolerability on a variety of skin types (normal, dry, oil, combination, sensitive).

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Abstract N°: 758

Skin care promotes cutaneous microbiome protection and recovery in an acute stratum corneum stress model in healthy volunteers and patients with inflammatory bowel diseases

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Introduction & Objectives:

Skin physiology and microbiome are established indicators of the epidermal homeostasis status. Stress models can reveal underlying mechanisms and their modulation. Here we investigated the cutaneous microbiome in relation to skin physiology after pre-treatment with two cosmetic leave-on lotions (pH 5.5 – B - vs. pH 9.3 - A) in 24 healthy volunteers and 17 volunteers with inflammatory bowel diseases (IBD) in a mild tape stripping (TS) model.

Materials & Methods:

The microbiome was analyzed by 16S-rRNA-gene amplicon sequencing and put in relation to the following skin physiology parameter: epidermal barrier function (TEWA-Meter TM300), stratum corneum hydration (Corneometer CM 825), skin surface pH (pH-Meter) and skin erythema/melanin (Mexameter).

Results:

Both in healthy and IBD volunteers acidic lotion B showed a significant higher stratum corneum hydration compared to basic lotion A after 7 days of treatment. Both in healthy and IBD volunteers TS induced a relevant barrier disruption. The TEWL values remained elevated over the following two days without returning back to normal. In healthy volunteers and IBD a significant higher barrier disruption was detectable in basic lotion A vs. acidic lotion B after TS on day 8. In healthy and IBD volunteers Lotion A treatment induced over 7 days a significant increase of the surface pH compared to Lotion B and the control area. The increased pH was still present on day 8. Alpha diversity was reduced in IBD vs. healthy controls in faecal and skin samples. TS reduced the alpha diversity in all areas. One and two day after TS (Day 8 and 9) no difference in the pre-treated areas (with both lotions) was detectable compared to the untreated area neither in healthy volunteers nor in volunteers with IBD. Pre-treatment with both lotions was associated with a rapid recovery to pre-TS values of the alpha diversity both in volunteers with IBD and healthy volunteers. The present data show a protective effect regarding the alpha diversity of both lotions with a slightly better protection and return to normal for lotion B. The two leave on lotions are safe products in protective application in our stress model.

Conclusion:

The study proved the suitability of an experimental stress model in the assessment of skin surface microbiome protection in relation to skin physiology after pre-treatment. Stratum corneum hydration increased with both lotions and significantly better for acidic lotion B. This effect was still detectable one day after stopping the treatment. The lower pH in lotion B can be seen as a modulating effect of the protection with a positive effect on the stratum corneum hydration and subsequently on cutaneous microbiome both in healthy and IBD volunteers.

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Abstract N°: 1301

Skin anti-aging effect of oral vitamin A supplementation in combination with topical retinoic acid treatment in comparison with topical retinoic acid alone: A randomized, prospective, parallel trial.

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[1]Cantabria Labs Difa Cooper

Introduction & Objectives:

Topical retinoids treatment is considered a reference standard therapeutic approach of both chrono and photo skin ageing. Retinol (vitamin A) is the precursor of endogenous retinoids. So far clinical data regarding the potential anti-ageing effect of an "In & Out" strategy combining oral vitamin A supplementation (50.000 U.I.) (Vit.A) with a retinoic acid 0.02% topical gel formulation (RG) are lacking. We performed a prospective, randomized, parallel group trial comparing the combination of Vit. A oral supplementation (one capsule daily) and RG applied in the evening (Group A) in comparison with the topical RG treatment alone (Group B) for 12 weeks.

Materials & Methods:

A total of 50 subjects (men and women, aged >50 years, mean age 63±8) and with moderate-severe facial skin ageing (Glogau score >2) were enrolled after their written informed consent. Twenty-five were randomly assigned to Group A and 25 to Group B. The primary endpoint was the clinical evaluation of a Skin Ageing Global Score (SAGS) assessing 6 skin parameters: elasticity, wrinkle, roughness, pigmentation, erythema, and skin pores with a 5-point score for each item (from 0 to 4; maximum score: 20). SAGS score was evaluated at baseline, week 6 and week 12. A VISIA face sculptor analysis was performed in a subgroup of 20 subjects. Skin tolerability was evaluated in both groups at week 6 and 12.

Results:

All the enrolled subjects concluded the trial. At baseline the SAGS score was 15±5 in Group A and 13±5 in Group B. In comparison with baseline SAGS scores in both groups were reduced by 19% (group A) and by 17% (Group B) after 6 weeks and by 36% (Group A) and by 30% (Group B) at week 12. At the end of study treatment, SGAS score absolute reduction in Group A was significantly greater (p=0.02) in comparison with Group B (absolute difference between Group A and Group B= -1.2; 95% CI: from -0.19 to -2.2). Similar data were observed with the VISIA analysis. Both treatment regimen were well tolerated.

Conclusion:

The combination with an "In & Out" strategy of oral retinol supplementation and topical retinoic acid gel shows superior efficacy in term of clinical and instrumental improvement in comparison with topical retinoic acid treatment alone in subjects with moderate/severe skin ageing.

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Abstract N°: 1381

comparing the efficacy and safety of cryotherapy and plasma in treating seborrheic keratosis: a randomized controlled trial

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Introduction & Objectives:

Seborrheic keratoses (SK) is one of the most common benign epithelial skin tumors and treatment is not routinely prescribed except for cosmetic concerns. Plasma exeresis is a new minimally invasive technique that has been gaining attention lately. The aim of this study is to compare the efficacy and safety of spark plasma and cryotherapy for the treatment of SK.

Materials & Methods:

This study is a randomized controlled trial (RCT). Patients aged more than 18 years old having at least four constant and typical SK with thickness 2-3 mm sized between 5-15 mm were enrolled. Each side was randomly assigned to be treated either with cryotherapy or plasma spark. One side was treated with plasma spark (voltage 2-8 kilovolt, frequency 80 kilohertz, and a maximum power of 10 watt). The other side was treated with cryotherapy using a cotton swab dipped into liquid nitrogen for two freeze cycles of 15 seconds and a peripheral rim of 1mm. The patients were evaluated at baseline then every 3 weeks up to 6 weeks. Patients were assessed blindly by two dermatologists in three visits with three weeks intervals (0, 3, 6 weeks) using physical assessment scale as follows:Score 0: complete clearance of the SK lesion, Score 1: partial clearance of the SK lesion, Score 2: thin remained lesion with less than 1 mm depth, and Score 3: deep remained lesion with more than 1 mm depth.Lesions scored 0 were considered as clear and those scored 1, 2, and 3 as non-clear lesions. We evaluated patients for adverse effects including erythema, edema, or any local reaction.

Results:

Thirty-five male patients with a mean age of 66.51 ± 11.04 years were enrolled. The majority of patients had Fitzpatrick skin type III (20, 57.1%) and the most common location of the lesions were forehead 30 (42.85%), temple 23 (32.85%), and neck 6 (8.57%), respectively.

At week 3,37.1 % (N=13) of lesions treated by plasma spark were clear, that was higher than those treated by cryotherapy 17.1% (N=6). However, this difference was not significant (p-value: 0.06) (Figure 1). At week 6, 16(57.1 %) out of 28 remaining lesions, treated by plasma spark were clear, that was significantly higher (p-value: 0.005) than those completely cleared by cryotherapy 6 out of 29 remaining lesions (20.7%) (Figure 1, 2).

The mean physician assessment scale score was significantly reduced in both groups in the second follow-up compared to the first follow-up (plasma group first follow-up 0.91 ± 0.89 vs second follow up 0.5 ± 0.64 and p-value: 0.0031; cryo group first follow-up 1.4 ± 0.84 vs second follow up 1.1 ± 0.72 and p-value: 0.0002) (figure 3).

Regarding side-effects, no significant difference was seen between two groups (p=0.438). The most common complications observed in the plasma and cryotherapy groups were erythema (10/19, 52.63%) and hypo Pigmentation (5/13, 38.46%).

Conclusion:

We found that both cryotherapy and spark plasma are effective treatment options for SK. However, we observed a significantly higher number of cleared lesions treated with spark plasma in 6 weeks and after 2 treatment sessions. The most common complications observed in the plasma and cryotherapy groups were erythema and hypo Pigmentation, respectively. No serious adverse event was observed. We believe that spark plasma can be a good treatment option with promising results for treating SK.

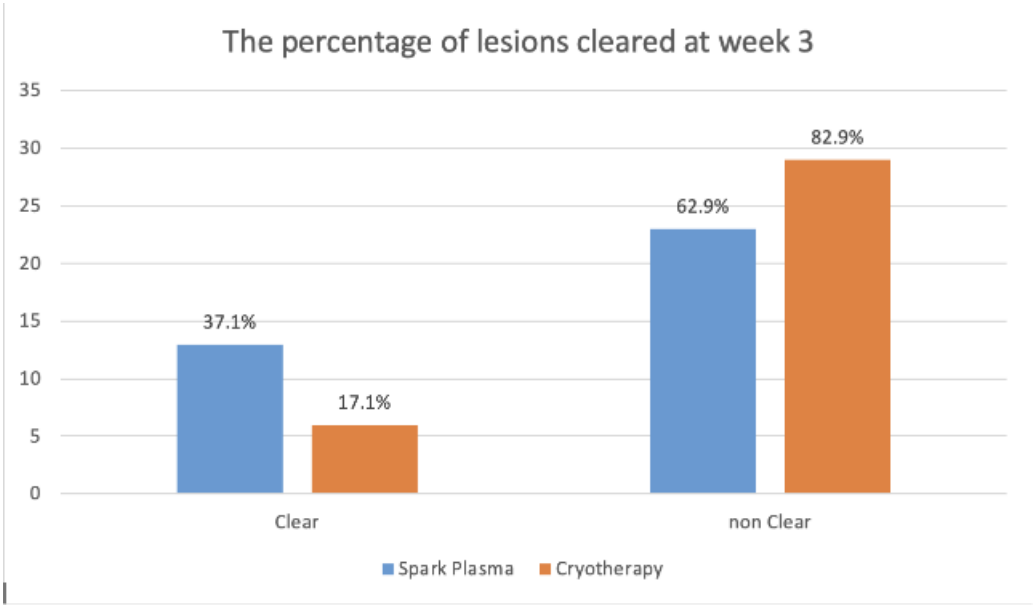

Figure 1: The percentage of lesions cleared at week 3

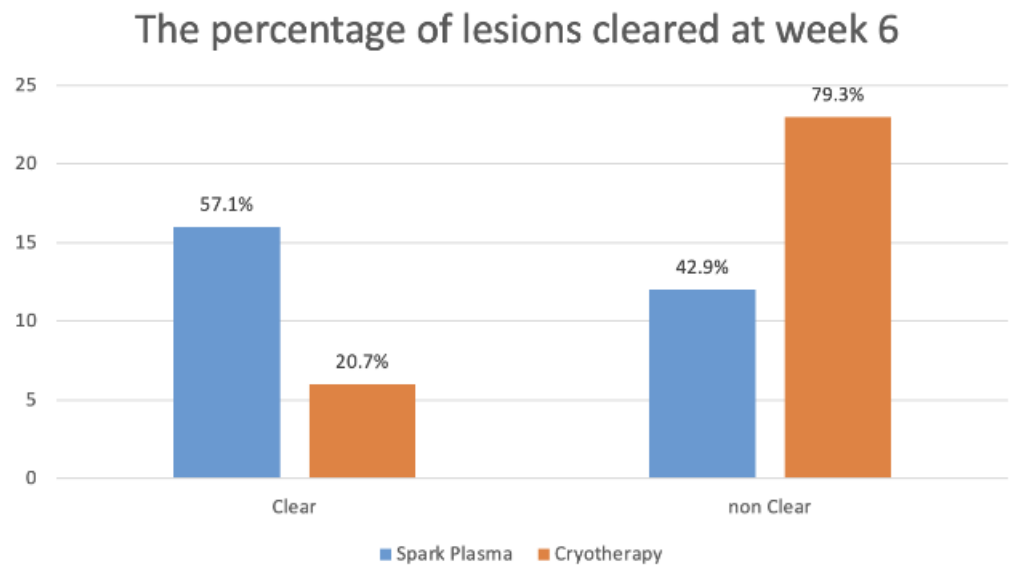

Figure 2:The percentage of lesions cleared at week 6

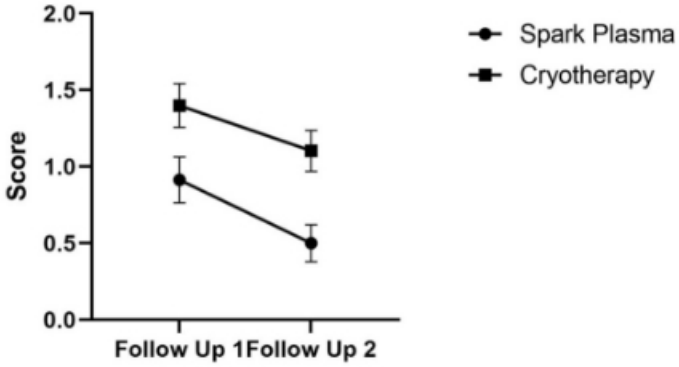

Figure 3: Physicians scoring of patients in the first and second follow-ups

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BERLIN 11-14 OCTOBER 2023
EUROPEAN ACADEMY OF DERMATOLOGY AND VENEREOLOGY

Abstract N°: 1455

Q-Switched Nd:YAG Laser to Manage Hyperpigmentation in Asians: A Multicenter Study

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Introduction & Objectives: In** cosmetic dermatology, benign hyperpigmentation is a prevalent issue. A new generation laser, the Q-switched 1064/532-nanometer (nm), able to shorten pulse duration to hundreds of picoseconds, has emerged showing great results. Q-switched laser systems release a high amount of energy in brief time intervals (in the range of pico- or nanoseconds and with a wavelength of 532–1064 nm). These lasers involve the selective destruction of melanosomes by photomechanical and minimal thermal effects while sparing surrounding tissues. Although many studies have been conducted on Caucasians, there is increasing scientific evidence suggesting that this laser may also be equally effective on Asians that, usually, respond to these treatments differently, given to the higher presence of melanin in their epidermis.

The aim of the study was to demonstrate that Q-switched 1064/532 nm laser can be seen as a safe and effective option to treat benign melanosis in Asians and to evaluate the possible associated side effects.

Materials & Methods: Asian patients with benign hyperpigmentation were enrolled in this retrospective study at three different dermatological clinics.

Lesions were clinically categorized into epidermal and dermal lesions through a spectral analysis of melanin. Patients were treated with a 1064/532 nm Q-switched laser system and the treatment parameters were as follows: picosecond 1064 nm, 0.8–3 J/cm2 for dermic lesions and picosecond 532 nm, 0.3–1 J/cm2 for epidermal ones. Up to four laser treatments were carried out, each at least 30 days apart. During a three months follow-up after the final session, patients' satisfaction was evaluated using a Visual Analogue Scale (VAS). Images taken prior to laser treatments and thereafter were compared, and the aesthetic effect was scored on a Five-point Scale by two blinded specialists.

Results: A total of 31 participants were included in the study: 25 (80.4%) women and 6 (19.4%) men, with average age of 48.96 ± 13.68 years. Just 3 (9.7%) cases of hypermelanosis were dermic, while 28 (90.3%) included the epidermis. The majority of melanosis (n = 28, or 90.3%) occurred on the face. The elimination of hyperpigmentation required up to four treatments (average amount of sessions was 1.6 ± 0.7). Dermal lesions instead required more treatments (six to ten). Five-point Scale valuation reported a mean score of 2.70 ± 0.78, with a higher score for epidermal hyperpigmentation and a lower score for dermal ones. Patients reported a mean VAS score of 7.03 ± 1.35. Most of the participants described temporary perilesional erythema, occasionally accompanied by itching, which resolved in a few days.

Conclusion: Q-switched laser with picosecond pulses is an effective and safe treatment for benign hypermelanosis in Asians. The use of this laser is an exciting and constantly emerging field, not only in treating hyperpigmentation in light skin but also in darker and more difficult to treat skin.

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Abstract N°: 1468

Management of dermal filler complications using duplex ultrasound: Two case reports

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Introduction & Objectives:

Injection therapies for cosmetic enhancement, particularly anti-aging treatments, are increasingly popular, with dermal fillers using hyaluronic acid emerging as a popular option. However, the safety profile of these fillers is largely dependent on the operator, and the rate of complications is expected to increase with the expanding use of dermal fillers.

Duplex ultrasound allows injectors to visualize anatomy in real-time, including previously injected permanent fillers. Incorporating duplex ultrasound into managing hyaluronic acid filler complications can improve the safety of filler treatments, becoming an essential tool for managing complications and improving outcomes.

Materials & Methods:

We present two clinical cases. A 22-year-old woman who experienced necrosis on the nose tip due to compression from hyaluronic acid infiltration. We managed her with ultrasound-guided hyaluronidase injections resulting in instant success as evidenced by restored flow on duplex ultrasound (see fig. 1-2). The second case, a 35-year-old woman presented with lip angioedema after hyaluronic acid infiltration, which we managed with ultrasound-guided techniques that resulted in the dissolution of the filler and reduction of the lip edema and discomfort in the patient (see fig 3-4).

Results:

Ultrasound mapping before injection minimizes the risk of intravascular injections, identifies previously placed fillers, and accurately diagnoses filler-related complications. Ultrasound is particularly valuable for patients with previous filler treatments, where the exact filler composition may be unknown.

Hyaluronic acid fillers can be dissolved with hyaluronidase in case of complications. Injectors must train their eyes in pattern recognition of different facial layers and filler composition as every structure, including fillers, has its own echogenicity.

Duplex ultrasound enhances injector awareness of anatomy, improving the ability to detect and address issues, ultimately improving outcomes. Ultrasound-guided intralesional delivery of hyaluronidase is an additional benefit, making treatment more precise.

Conclusion:

In conclusion, duplex ultrasound improves the safety and accuracy of hyaluronic acid filler treatments, becoming an essential tool for managing complications and improving outcomes. Further studies are needed to assess the efficacy and safety of ultrasound-guided filler treatments to provide a more comprehensive understanding of its potential benefits.

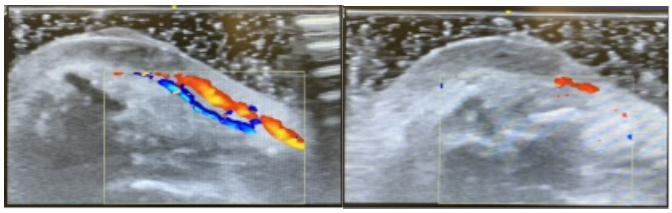

Fig 1 Fig 2

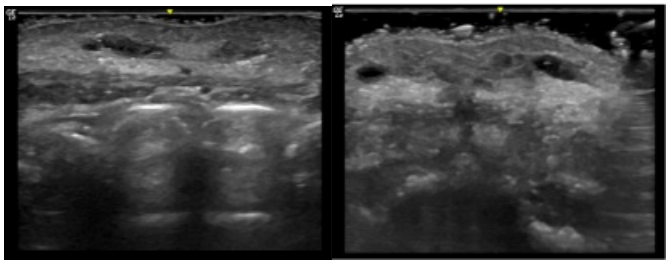

Fig 3 Fig 4

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Abstract N°: 1515

Effective Sequential and Combined Management of Auricular Keloids: A Novel Treatment Protocol Utilizing Ablative CO2 and Dye Laser Therapy - An Advanced Single-Center Clinical Investigation

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Effective Sequential and Combined Management of Auricular Keloids: A Novel Treatment Protocol Utilizing Ablative CO2 and Dye Laser Therapy - An Advanced Single-Center Clinical Investigation

Introduction & Objectives:

Auricular keloids present considerable aesthetic and functional impediments for patients undergoing otologic surgeries. Conventional therapeutic approaches frequently yield suboptimal outcomes in keloid mitigation. This study delineates our center's clinical experience implementing an innovative, combined treatment strategy comprising ablative CO2 laser followed by dye laser therapy to ameliorate auricular keloid morphology and quality.

Materials & Methods:

A cohort of 15 Caucasian patients presenting with auricular keloids was enrolled in our center. The treatment protocol entailed an initial multispectral analysis at baseline to appraise keloid composition and discern the presence of vascular or fibrous constituents. Guided by the multispectral investigation results, patients were directed towards tailored laser sequence protocols, encompassing ablative CO2 laser therapy and dye laser therapy. Keloid evaluation was conducted at baseline and subsequently at 3-week intervals post-treatment employing the Vancouver Scar Scale (VSS) and the Patient and Observer Scar Assessment Scale (POSAS).

Results:

At the final follow-up, the cohort demonstrated a statistically significant reduction in VSS and POSAS scores compared to initial measurements ($p<0.05$). Substantial improvements in keloid chromaticity, texture, and pliability were observed. Notably, the recurrence of auricular keloids was forestalled in the treated patients. The combined treatment paradigm was well-tolerated, with a minimal incidence of adverse events.

Conclusion:

The clinical experience accrued at our center, utilizing the pioneering treatment modality of multispectral analysis followed by tailored ablative CO2 and dye laser therapy sequences, suggests that it constitutes a safe and efficacious approach for addressing auricular keloids. This cutting-edge methodology offers remarkable keloid enhancement and precludes recurrence, proffering an innovative treatment alternative for patients desiring to ameliorate the morphology and quality of their auricular keloids. Further investigations, including randomized controlled trials, are warranted to substantiate these findings and optimize treatment paradigms.

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Abstract N°: 1608

Vulvar Lichen Sclerosus and Rejuvenation of the Genital Area: Consider Treatment with Heterologous Type I Collagen

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Introduction & Objectives:

Vulvar Lichen Sclerosus (VLS) is a chronic inflammatory dermatosis. Advanced disease has a considerable impact on the quality of life and it is associated with increased risk of vulvar squamous cell carcinoma (SCC). There is no definitive cure for VLS .

Materials & Methods:

We evaluated the compliance, the efficacy, and safety of Heterologous Type I Collagen (HTIC) intradermal injections to a few female patients with diagnosis of biopsy proven active VLSc, relatively unresponsive to topical steroid treatment. 100mg of HTIC sterile powder, disolved in 4,5ml of normal saline and 0,5ml of lidocaine was injected to the affected areas. 0,1ml of the solution was injected intradermally or directly subdermally in a grid pattern at approximately 1cm intervals. The patients received 4 treatments, once every two weeks.

Results:

The patients exhibited a decrease of the surface area of the lesions after the first treatment with complete resolution after the third treatment. Pruritus, soreness, discomfort and dyspareunia, that the patients were suffering from, were also resolved. There was no relapse during the next 12 months of follow up with a minimal maintenance treatment.

Conclusion:

HTIC is a potential new, promising treatment option for VLS, which needs further assessment in randomized controlled trials.

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Abstract N°: 1652

Successful treatment of corticosteroid-induced cutaneous atrophy and dyspigmentation with Heterologous Type I Collagen

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[1]Private Practice, Dermatology-Venereology, Thessaliniki, Greece, [2]Private Practice, Dermatology, Rome, Italy

Introduction & Objectives:

Steroid-induced atrophy is a well-known complication of intralesional steroid use and, although typically self-limited, can be distressing to patients. This case report describes the successful treatment of cutaneous atrophy and dyspigmentation on the elbow joint secondary to intralesional steroid injections for lateral epicondylitis using Heterologous Type I Collagen (HTIC).

We sought to evaluate the efficacy, tolerance and safety of Heterologous Type I Collagen for the treatment of steroid-induced dyspigmentation and cutaneous atrophy due to intralesional triamcinolone treatment of a lateral epicondylitis.

Materials & Methods:

A 26-year-old woman with Fitzpatrick skin type IV presented with a steroid-induced cutaneous atrophy and dyspigmentation was treated with Heterologous Type I Collagen (HTIC) intradermal injections. 100mg of HTIC sterile powder, disolved in 5ml of normal saline was injected to the affected area. The patient received 4 treatments, once every two weeks.

Results:

The area treated with HTIC demonstrated skin quality improvement after the first session and complete resolution of the lesion after the fourth session. The patient reported minimal to moderate pain and there were no side-effects.

Conclusion:

The area treated with HTIC demonstrated skin quality improvement after the first session and complete resolution of the lesion after the fourth session. The patient reported minimal to moderate pain and there were no side-effects.

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Abstract N°: 1657

Ex vivo and clinical evaluation of efficacy and mode of action Anogeissus leicarpus and Retinol containing eye cream

Rocky Graziose[1], Martin Keh[1], Kristine Schmalenberg[1], Claude Saliou[1], Nadine Pernodet[1]

[1]The Estee Lauder Companies

Introduction & Objectives:

With age, there is a decline in the quantity and quality of extracellular matrix components in human skin. This decline influences the visible qualities of the skin, which is especially noticeable around the eye area. A new anti-aging cream was created that included an innovative encapsulated retinol and an extract bark extract of *Anogeissus leiocarpus,* a traditionally used plant native to tropical Africa. When tested alone and in combination, these ingredients were shown to positively impact critical components in the skin's extracellular matrix – namely collagen, elastin, and fibrillin. These ingredients, in combination with other actives, were included in a cream that significantly reduced the appearance of age-related conditions around the eye, including Wrinkles, Fine Lines, Puffiness, Dark Circles, and radiance.

Materials & Methods:

Ex Vivo Study: The effect of Encapsulated retinol, *Anogeissus* Extract, and a combination of the two was assessed using human skin explant models (Ex vivo) prepared from an abdominoplasty for extracellular matrix components (Collagen, Elastin, and Fibrillin). Test products and control were applied topically to the skin's surface for a period of 8 days. On day 10 samples were collected, histologically processed, and analyzed for changes in Elastin, Collagen, and Fibrillin content by immunostaining.

Clinical Study: The clinical efficacy of the anti-aging cream in subjects with mild-to-moderate wrinkles, fine lines, puffiness, dark circles, and dullness (lack of radiance) around the eye area was assessed in a single-centered clinical trial. Of the 35 female subjects enrolled, 29 subjects completed the clinical trial. The included Fitzpatrick skin tone was II-V, and ages ranged from 46 to 65. During the study, subjects were instructed to ramp up the usage of the cream around the eyes from once every other day for the first two weeks to twice daily from the fifth week to the end of the study. Clinical grading was conducted at baseline, week 2, week 4, week 8, and week 12 to evaluate the anti-aging efficacy of the cream.

Results:

Ex Vivo Study: The results show that retinol and *Anogeissus* extract could significantly increase the number of extracellular matrix components when applied to skin explants. However, when combined, these ingredients showed an improvement greater than if used alone.

Clinical Study: Results of the clinical grading of efficacy parameters showed a statistically significant decrease in grading scores for the appearance of wrinkles, fine lines, puffiness, dark circles, and dullness (lack of radiance) around the eye area at each post-baseline time point (weeks 2, 4, 8, and 12) when compared with baseline. After 12 weeks of use, 31% visible reduction in fine lines, 23% visible reduction in wrinkles, 27% visible reduction in puffiness, and 20% visible reduction in dark circles were observed.

Conclusion:

This study shows that Retinol and *Anogeissus* contribute to the rebuilding of the extracellular matrix by increasing

collagen, elastin, and fibrillin, and when combined, showed a potentiated effect. When included with other actives in an anti-aging cream, there was a measurable and significant improvement in characteristics of the eye area associated with age.

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Abstract N°: 1793

Tyrosinase Inhibition to prevent of iatrogenic, laser associated post inflammatory hyperpigmentation

Adel Sammain*[1], Bettina Ruemmelein[2], Agneta Troilus[3], Vasanop Vachiramon[4]

[1]Beiersdorf AG, Global Medical Management, Hamburg, Germany, [2]Hautwerk - Dr. Rümmelein, Zürich, Switzerland, [3]Laser&Dermatology, Malmoe, Sweden, [4]Mahidol University, Ramathibodi Hospital, Bangkok, Thailand

Tyrosinase Inhibition to prevent of iatrogenic, laser associated post inflammatory hyperpigmentation

Introduction & Objectives:

Skin regeneration after aesthetic laser procedures can be associated with postinflammatory hyperpigmentation (PIH) because melanocytic tyrosinase activity can upregulated by whole postprocedural inflammasome and impaired skin barrier and UV protection. The post or even pre-procedural application of an effective tyrosinase inhibitor is associated with a lower incidence of postprocedural PIH. We want to report about the results from three different studies where Isobutyl Amido Thiazolyl Resorcinol (ITR; Thiamidol®) was applied to avoid PIH as complication after aesthetic laser procedures.

Materials & Methods:

We conducted three different studies to investigate the efficacy and safety of a formulation containing ITR in the treatment and prevention of PIH, associated with iatrogenic aesthetic laser procedures. The formulations containing ITR were applied 4 times daily.

In the first randomized, split-face, 12-weeks study we compared the efficacy and safety of combined ITR and Low-fluence Q-switched Nd:YAG 1064-nm laser (LFQS) with LFQS-monotherapy for facial hyperpigmentation.

The second 8-week study followed a split hand, double-blind, non-randomized, vehicle-controlled design and aimed to evaluate the added benefits of an adjunctive ITR application after laser treatment (532nm; 5mm; 0,7–0,9 Joule) of solar lentigines.

During the third uncontrolled study, laser associated facial PIH were treated with ITR over a period of 12 weeks.

Results:

In the first study twenty-four patients completed the study. Both sides demonstrated significant reductions of mean Relative lightness index (RL*I), and mean Facial Hyperpigmentation Severity Score (FHSSm) from baseline ($P < .01$). At the 4th week, the Thiamidol-treated side showed more improvement of mean RL*I than the placebo-treated side (62.5% vs 47.3% improvement, $P < .05$). The mean FHSSm on the ITR-treated side was reduced at a significantly higher percentage as compared to placebo (54.4% vs 40.2% reduction, $P < .05$). Partial recurrence was observed on both sides. No serious side effects were noted.

In the second study, thirteen panelists finished the study and after 4 weeks and 8 weeks, there was an overall superior result on the Thiamidol® treated hand as compared to placebo. No adverse events were noted.

In the third uncontrolled study 30 subjects were included and 27 finished the study. There was a significant improvement in dark spot count and intensity after 4 and 12 weeks.

Conclusion:

Overall, the first study showed that combined ITR and LFQS therapy was more superior than LFQS monotherapy in the treatment of facial hyperpigmentation. ITR may serve as adjuvant for patients with such condition.

The second study strongly supports the recommendation of a Thiamidol containing formulation additional to sun protection post ablative laser procedures.

The third study demonstrated effective improvement of laser associated PIH without any side effects and very high patients satisfaction rates.

Currently, we are running further studies to assess as to whether the pre-procedural application of a tyrosinase inhibitor Thiamidol® together with anti-inflammatory Licochalcone A is beneficial regarding the overall outcome.

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Abstract N°: 1798

Long-term Safety With a Hyaluronic Acid and Calcium Hydroxyapatite Combination Filler in Facial Aesthetic Rejuvenation

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Introduction & Objectives: The primary aim of this study was to assess late-onset adverse events (AEs) in subjects who received subdermal or deep-dermal injections with the combination soft tissue filler comprising hyaluronic acid and calcium hydroxyapatite (HA+CaHA) with lidocaine at least 18 months prior to evaluation using dermatoscopy and high-frequency ultrasound (US). The secondary aim was to assess the presence of HA+CaHA in facial tissues of subjects who had received injections at least 18 months prior to evaluation.

HA+CaHA combines crosslinked HA gel (20 mg/mL) matrix with embedded CaHA (55.7% w/w) microspheres. The complementary dual mode of action includes soft-tissue filling from the HA (leading to an immediate visible aesthetic outcome) and neocollagenesis from CaHA (resulting in a sustained dermal thickening and improved skin architecture that increases skin firmness and improves overall skin quality). While the safety of each of the individual components of HA+CaHA in facial aesthetic procedures is well established, the long-term safety of the combination product is of interest.

Materials & Methods: This postmarketing retrospective study of adults who received HA+CaHA injections ≥18 months prior to evaluation assessed late-onset AEs using subject reports, and, in subsets of subjects, physician visual examination of injected areas, photo dermatoscope examination/rating of 8 side effects (edema, erythema, hematoma, necrosis, nodules/lumps, pigmentation, scars, crusts), and high-frequency US scanning interpreted by a radiologist. Presence of filler ≥18 months postinjection was assessed by US scanning; 1 untreated and 2 recently re-treated subjects were included as controls.

Results: Injection sites for 104 subjects included cheeks, nasolabial folds, marionette lines, jaw line, and chin. No AEs were reported by subjects. Visual and dermatoscope evaluation (n=87) found no skin abnormalities or noticeable AEs; no allergic reactions, granulomas, or infections were found by dermatoscope. Among 64 subjects with US scanning, no treatment-related inflammation, granulomas, or other AEs were detected. No filler was detected by US in treated subjects (n=61); only study subjects with recent repeat treatment (n=3) and recently injected controls (n=2) had detectable filler.

Conclusion: These results support the long-term safety of HA+CaHA soft tissue filler ≥18 months postinjection. No AEs were reported by subjects and no treatment-related skin abnormalities or AEs were detected by dermatoscope or US. HA+CaHA filler was not detected in any subjects who were assessed by US ≥18 months postinjection.

Originally presented at the International Master Course on Aging Skin (IMCAS) Annual Meeting, Paris, France, June 3-5, 2022.

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Abstract N°: 1803

Delayed-onset nodules following Vycross hyaluronic acid filler treatment: reported rates from global post-marketing surveillance

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[1]AbbVie Inc, Chicago, United States

Introduction & Objectives: This analysis examined global post-marketing surveillance (PMS) data on delayed-onset nodules after Vycross hyaluronic acid filler treatment.

Materials & Methods: Delayed-onset nodules, defined as onset ≥4-weeks post-injection of Vycross fillers (VYC-15L [Volbella], VYC-17.5L [Volift/Vollure], VYC-20L [Voluma/Voluma XC], VYC-25L [Volux]), reported to AbbVie from January 1, 2007 to December 31, 2021 were classified as inflammatory (including biopsy-confirmed granulomas) and non-inflammatory.1 Reported rates were calculated as number of nodules divided by total number of syringes sold globally. PMS has limitations (ie, incomplete, inaccurate, untimely, unverified, biased data) and cannot determine incidence or prevalence of an event.

Results: Of 33,756,999 syringes sold, 5,333 delayed-onset nodules were reported (0.016% reported rate). Non-inflammatory nodules were reported more frequently (n=3,913) than inflammatory nodules (n=1,420, including n=233 granulomas). Overall reported rate for VYC-15L=0.034% (non-inflammatory=0.025%; inflammatory=0.008%). Overall reported rate for VYC-17.5L=0.020% (non-inflammatory=0.015%; inflammatory=0.005%). Overall reported rate for VYC-20L=0.010% (non-inflammatory=0.007%; inflammatory=0.003%). Overall reported rate for VYC-25L=0.012% (non-inflammatory=0.006%; inflammatory=0.006%). In cases with reported outcomes, events resolved spontaneously or following treatment (eg, intralesional steroids, antibiotics, hyaluronidase).

Conclusion: The global reported rate of delayed-onset nodules associated with Vycross dermal fillers is low (<0.02%). Event rates have been noted to increase with early adoption of products, then decrease as utilization increases.

1Philipp-Dormston WG, Goodman GJ, De Boulle K, et al. Global Approaches to the Prevention and Management of Delayed-onset Adverse Reactions with Hyaluronic Acid-based Fillers. *Plast Reconstr Surg Glob Open*. 2020;8(4):e2730. doi: http://dx.doi.org/10.1097/GOX.0000000000002730

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Abstract N°: 1976

Laser Hair Reduction in a case of unwanted ectopic hair following reconstructive surgery of the ear in Goldenhar Syndrome

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Introduction & Objectives:

Goldenhar syndrome is a rare congenital condition first recognised in 1952. Children born with this condition may have partially formed or totally absent ears (microtia), benign growths of the eye, facial asymmetry, spinal deformities whilst organs including the heart, kidney, lungs and nervous system can also be affected1. In most cases, the deformity only affects one side of the body. The reported incidence is every 3,000-5,000 births2. Diagnosis requires both a thorough history and clinical examination aided by radiological imaging where appropriate. Treatments vary depending on the body systems affected and is therefore on a case-by-case basis however cosmetic surgery may be required particularly for facial irregularities.

Long-pulsed Alexandrite laser is widely used for hair removal as well as various skin disorders including vascular and pigmented lesions. It is quick, extremely precise, leaving the surrounding tissue undamaged and has a low risk of side-effects3.

Materials & Methods:

We present a case report on a 16-year-old boy referred from ENT surgeons at our local Children's Hospital with background of Goldenhar syndrome having had reconstructive surgery for microtia. The surgeons had built him an ear out of grafted cartilage and local flaps involving skin from the scalp. Being scalp skin, the ~~"ear"~~ had unwanted ectopic hair growth. He was referred for laser treatment to reduce the hair growth. He had Fitzgerald type three skin and dark coarse hair, particularly affecting the lower portion of the flap. He was assessed as suitable for laser treatment. The patient was treated with Alexandrite Laser with a wavelength 755nm, spot size 14mm, fluence 16-22.75 J/cm^2, Pulse width 20-40ms, with air cooling. He received a total of eleven treatment sessions to date spaced six to ~~-~~twelve weeks apart.

Results:

This case reports good reduction in hair growth after treatment with Alexandrite laser. The patient reported their hair fell out after each treatment with a delay in regrowth getting longer each time. Their hair was noted to be softer and finer. Hair count pre-treatment was 20-40/cm^2 whilst now varies between 0-5 and 5-10 /cm^2 which shows an excellent improvement. The patient tolerated the treatment well with no complications.

Conclusion:

We are** presenting a case of the safe and well tolerated use of alexandrite laser to reduce unwanted hair growth as an adjunct to reconstructive surgery in the context of Goldenhar Syndrome.

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Abstract N°: 2031

Are Psychopathological Disorders More Prevalent in Patients Seeking Minimally Invasive Cosmetic Procedures? A Case-Control Study

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[1]Tehran University of Medical Sciences, Department of Dermatology, Tehran, Iran,[2]Deputy of Research, MOH of Iran, Ministry of health, Tehran

Introduction & Objectives:

As psychological disorders in individuals may result in undesirable outcomes after different procedures, it is essential to recognize these disorders. The individuals' psychological issues may lead to recurrent requests for reoperation, depression, adaptive disorder, family problems, Self-destructive behaviors and violence toward the doctor. The main purpose of this study is to compare the patterns of psychological disorders in candidates for skin cosmetic and non-cosmetic procedures.

Materials & Methods:

We considered patients referred to our dermatology hospital who were candidates for minimally invasive cosmetic procedures (dermal filler and Botox injections) in 2020-2021 as the case group. The control group consisted of patients who were candidates for the removal surgery of scalp or body lesions or nevus. Patients were asked to complete the Brief Symptom Inventory (BSI) questionnaire. The BSI questionnaire has 53 items that are used to assess psychological illnesses. At last, we compared the data obtained from the two groups.

Results:

A total of 99 patients, 54 cases and 45 controls, were included in this study. The mean age was 38.70±9.35 and 38.31±9.79 in the case and control groups, respectively. Of them, 91% and 56% were female in the cases and controls, respectively. The results of Mann-Whitney tests did not show any relationship between psychological disorders and the minimally invasive cosmetic procedures. The Global Severity indices (GSI) were 0.66 and 0.64 in case and control groups, respectively (P-value=0.904). Moreover, there was no significant relationship between psychological disorders and cosmetic procedure types (P-value=0.711).

Conclusion:

The current study indicated that patients who were candidates for minimally invasive cosmetic procedures did not have more psychopathological disorders than patients sought non-cosmetic dermatologic surgeries.

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Abstract N°: 2086

Results from Mesotherapy by an Innovative Hyaluronic Acid skin Booster estimated by VISIA system analysis

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Introduction & Objectives: A new mesotherapeutic hyaluronic acid (H.A.) substance has been recently produced containing a prototype form of cross-linked monophasic monodensified H.A. spheres, occurred after a four stage innovative production method (SCEDIS). In the present study the results of the above mentioned molecule as a mesotherapeutic agent was studied. Since detailed objectivity was required in order to estimate the overall result of the product on facial skin, the VISIA system has been chosen as the analysis tool.

Materials & Methods: Twenty female facial aesthetic patients (mean age 45 years old) participated, for a single mesotherapeutic treatment. The H.A. agent was injected by a 4mm 32G needle into the papillary dermis (total amount of 4ml per face), while injected quantity and technique were kept the same for all participants . The outcome was estimated by both VISIA analysis (before the treating session as well as for follow-up two months later), and FACE-Q questionnaire as well. Photos were taken in baseline and follow-up visit in 2 months. All VISIA parameters (wrinkles, pores, etc.), were estimated by ANOVA analysis methods.

Results: The statistical analysis concluded significant result ($p<0.005$) of the overall skin texture improvement, which proceed the favorable effect of the investigated product. The FACE-Q Questionnaire as statistically estimated (by a proper bar chart according to established methods) showed statistical significance to support the beneficial influence of the material tested ($p<o.001$).

Conclusion: The proposed modified mesotherapeutic H.A. molecule showed to induce significant skin texture improvement by both objective (VISIA) and subjective (FACE-Q) analysis tools probably due its unique HA sphere distribution.

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Abstract N°: 2089

Results on Tear Trough Deformity and Upper Lip Regional Wrinkles Correction by an Innovative Hyaluronic Acid Injectable Filler

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Introduction & Objectives: Infraorbital hollow, also known as "tear trough", as an early sign of aging is usually demanded to be treated by aesthetic patients. A similar request frequently follows concerning the vertical upper lip wrinkles ("barcode lines"). In the present study both areas were treated by a mild, flexible H.A. filler consisted of properly dispensed ultrafine multi spheres, ultimately produced by an innovative method (S.C.E.D.I.S) . We examined the overall cosmetic outcome in 20 female patients

Materials & Methods: Twenty female patients (mean age 45 years old) with obvious tear trough deformity and 15 of them having also intense barcode lines, were enrolled in the study.

The outcome (separately for each treated area) was estimated by VISIA analysis to objectively classify pre and post treatment image in a two months follow-up. Face-Q questionnaire was also applied to estimate the subjective feeling about the treatment outcome.H.A. filler consisted of both high and low molecular weight cross-linked monophasic H.A. spheres. For the statistical analysis the ANOVA method was used.

Results: VISIA counting bars as were studied by ANOVA analytic method, documented a statistically significant improvement ($p<0.005$) for all the participants in both treated areas. Answered FACE-Q questionnaire as statistically estimated (by a proper bar chart) demonstrated statistical significance concerning subjective feeling of satisfaction ($p<0.005$).

Conclusion: The studied modified H.A. filler showed to offer a statistically remarkable tear trough deformity and upper lip wrinkles improvement by both objective (VISIA) and subjective (FACE-Q) analysis tools, probably due to its unique H.A. spheres viscoelastic properties.

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Abstract N°: 2204

Comparative study between Fractional Carbon Dioxide (CO2) Laser 10,600 nm Alone versus Fractional CO2 laser Combined with Topical Tranexamic Acid and Topical Moxifloxacin in Treatment of Periorbital Hyperpigmentation

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Comparative study between Fractional Carbon Dioxide (CO2) Laser 10,600 nm Alone versus Fractional CO2 laser Combined with Topical Tranexamic Acid and Topical Moxifloxacin in Treatment of Periorbital Hyperpigmentation

Introduction & Objectives:

Periorbital hyperpigmentation (POH) is a commonly encountered condition that gives the patient a tired look with profound negative impact on self-esteem causing psychosocial and emotional distress and impairing patients' quality of life. Fractional Carbon dioxide (CO2) emits light at the far infra-red spectrum with wavelength of 10,600 nm that is absorbed strongly by water so it can reduce melanin deposits from both the epidermis and dermis. **Aim :** to compare between fractional carbon dioxide (CO2) laser 10,600 nm alone versus fractional CO2 laser combined with topical tranexamic acid and topical moxifloxacin in treatment of periorbital hyperpigmentation.

Materials & Methods:

This study included Sixty Egyptian patients suffering from periorbital hyperpigmentation, fulfilling the inclusion criteria, each patient was subjected to detailed medical history, clinical examination of the skin, digital photography and dermoscopic evaluation.

Results:

There was a high statistically significant reduction in the severity of POH in both groups after treatment. The blind investigators agreed that all modalities of treatment showed clinical improvement but the fractional Co2 laser with topical tranexamic acid (subgroup Ia) showed (40%) marked improvement compared with (36.7%) in Fractional laser with topical moxifloxacin (subgroup Ib) and (23.3%) in the Fractional carbon dioxide (CO2) laser alone (group II), there was a statistically significant difference between (group Ia) and (group II) laser alone, with p-value ($p<0.05$). According to the adverse effect in both groups, Side effects were minimal as mild pain, edema and erythema, there was no statistically significant difference found between both groups. So fractional Co2 laser alone or combined with topical tranexamic acid or topical moxifloxacin is safe, effective and can be a new modality for treatment of periorbital hyperpigmentation.

Conclusion: ** This study showed that fractional CO2 alone or combined with topical tranexamic acid or topical moxifloxacin seemed to be safe, effective and recommended treatment modality of POH. Fractional CO2 laser is an effective therapy for periorbital hyperpigmentation. Added to it tranexamic acid, moxifloxacin both augment the efficacy.

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Abstract N°: 2235

Awareness, knowledge, and practices of laser hair removal; a cross-sectional study from tertiary care dermatology clinics in Oman

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Awareness, knowledge, and practices of laser hair removal; a cross-sectional study from tertiary care dermatology clinics in Oman

Introduction & Objectives:

Laser hair removal (LHR) including home-based devices is becoming very popular in Oman. Despite that, some people still have many misconceptions about this procedure especially its long-term complications.

Objective: To assess the knowledge, attitude, and practices of LHR among dermatology clinic attendees in Muscat, Oman

Materials & Methods:

A cross-sectional survey with questionnaire was conducted at Al Seeb and Bowshar polyclinics in Muscat, Oman, to attendees between ages of 18 to 70 years. The Chi-square test was used to assess the association between different categorical variables. Results were considered statistically significant if $P < 0.05$.

Results:

The response rate was 80.6 % with completion of 403 out of the 500 distributed questionnaires. The mean (SD) age of participants was 32.9 (8.5). About 45.7 % (184/403) have used LHR, 88.6% (163/184) of them were satisfied with results. Side effects were reported in 22.8% (42/184) of the participants with redness 73.8% (31/42) being the most common one. Regarding knowledge about LHR, 20.1% (81/403) believed that hormonal workup is needed for all before LHR while 38.7% (156/403) others believed that LHR is a cosmetic procedure and can't be used as a treatment for any skin condition. When asked about safety of LHR, 9.7% (39/403) think that LHR can cause cancer while 53.8% (217/403) and 64.5% (260/403) believed it's unsafe in pregnancy and children respectively.

Conclusion:

Lack of knowledge with various misconceptions about LHR among patients attending dermatology clinics in Oman are prevalent, especially individuals who did not use LHR before. The findings of this study can help dermatologists to provide the patients with better education and knowledge regarding LHR.

Key words: laser, laser hair removal, knowledge, awareness, practices, misconceptions.

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Abstract N°: 2316

A prospective Double blind placebo control study to assess Efficacy and Safety of calcium hydroxylapetite in combination with microfocused ultrasound for striae distensae alba

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Introduction & Objectives:

Striae distensae (SD), otherwise known as "stretchmarks," are a common presenting complaint, particularly in young healthy women. Although benign, they can cause considerable psychological distress for the patients. Causes can be both physiological and pathological. Histologically it is thought that collagen bundle damage and elastic fibers/fibrillin changes contribute to their appearance; similar to that of scar formation or a healing wound.

Early striae present as flattened, thinned red plaques and are called striae rubra(SR) . Mature striae are white, depressed atrophic plaques and are called striae alba (SA).

Multiple treatment modalities for striae have been published with no single therapy considered to be ideal. Treatment results have been most favorable in the earlier stage striae rubra. Topical treatments showed some improvement but overall results were dissapointing.

Light therapies include Non ablative laser, ablative lasers and radiofrequency are thought to treat SD via targeting the hemoglobin content within the striae are used mainly for striae rubra which would support the theory of why SR respond better to treatment than SA.

A Microfocused ultrasound with visualization (MFU-V) is an energy-based technology that creates 'selective thermal coagulative zone' in part of the subcutaneous layer or the SMAS layer without damaging adjacent tissues like the skin or subcutaneous layer. Compared to existing rejuvenation devices, it can rejuvenate deeper areas more effectively. The heating of tissue causes collagen in these zones to become denatured and contract with subsequent de novo collagen synthesis and tissue remodeling

Calcium hydroxylapatite is a type of dermal filler composed of white 25–45 μM microspheres of CaHA suspended in a gel carrier. CaHA is considered both a dermal filler and a biostimulator due to its ability to induce neocollagenesis, neoelastogenesis, and angiogenesis. Its use has been reported for atrophic acne scars and in combination with MIFU for improving skin laxity and the appearance of lines in the neck and décolletage.

Study objective : To evaluate the Efficacy and Safety of calcium hydroxylapetite in combination with microfocused ultrasound for striae distensae alba

Materials & Methods:

In all 13 enrolled patients, one side of gluteus or abdomen or one thigh or shoulder was treated with MIFU followed by injection of CaHA, the other side was treated with Microfocused ultrasound with visualization (MIFU) followed by a placebo. Treatment included three identical sessions with 4-6 weeks intervals.

The patients wore sealed glasses and were blind to which side was injected with CaHA or placebo. All patients were photographed prior to first treatment and 60 days at least after the third session. Striae distensae alba severity changes were assessed by two independent physicians using the Striae assessment scale. Subject

satisfaction was assessed with a questionnaire.

Results:

Of thirteen patients , nine patients completed all three sessions. Treated subjects (N = 9) achieved moderate overall improvement in baseline striae distensae severity . Subjects were (n = 6) very satisfied or satisfied with their aesthetic results in both sides. There was a greater improvement on the CaHA side comparing to placebo. The most common adverse event was hematoma (n=4) which absorbed and disappeared eventually.

Conclusion:

Combining MFU-V and diluted CaHA is effective for treating striae distensae alba

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Abstract N°: 2381

Nd:YAG and non-ablative Er:YAG lasers for treating symptoms of demodicosis

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Nd:YAG and non-ablative Er:YAG lasers for treating symptoms of demodicosis

Introduction & Objectives: Demodicosis cutis is a skin disease caused by two follicular mites: demodex folliculorum and demodex brevis. It can mimic many other inflammatory diseases and can cause diagnostic difficulties. Due to no strict therapeutic protocol there have been different treatment modalities. Recently, vascular lasers have been used because of their anti-inflammatory effect. The lack of sufficiently good response to vascular lasers for persistent facial erythema, caused by demodex mites in patients who refuse medical treatment, necessitates the search for new alternative laser therapy methods. This case aims to show the effectiveness of combining 1064 Nd:YAG and non-ablative 2940 Er:YAG lasers in one session for non-ablative treatment of pathological erythema in a patient with demodicosis. The demonstrated results have been achieved with one laser treatment. We speculate that the effect could be caused by a thermal acaricidal effect achieved with the combined laser approach.

Materials & Methods: One female patient diagnosed with demodicosis with persistent erythema after a good response to medical therapy, received a three-step laser protocol. The condition of the patient has been evaluated by a dermatologist before and after each session and progress has been documented with photos made with VISIA 7 before and 20 days after the laser procedure.

The combination of two wavelengths leads to heating the epidermis and dermis to temperature that is destructive for the viability of the demodex mites and therefore leads to decreasing the pathological population. Furthermore, heating stimulates new collagen production, which leads to improvement of the skin firmness, texture and barrier function.

Results: The result after one treatment with combination of 1064 Nd:YAG laser and non-ablative 2940 nm Er:YAG laser shows satisfactory improvement of the patient with minimal adverse effects. Photographic evaluations show decreasing of the facial erythema along with improvement of the skin quality including pore sizes, texture and color. The treatment was well tolerated and was performed without using anesthesia.

Conclusion: In our experience, combined laser treatment of 1064 Nd:YAG and non-ablative 2940 Er:YAG proved to be a safe and effective way of improving persistent facial erythema, demodex population and skin texture in a patient with demodicosis. There is data for Nd:YAg laser application in demodicosis treatment but the inclusion of Er:YAG laser is a new approach which requires more studies and long-term observation.

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Abstract N°: 2392

Diffused adverse reaction to Polycaprolactone-based dermal filler

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Introduction:

We present the case of an acute, diffused adverse reaction to Polycaprolactone-based dermal filler.

The patient, an otherwise healthy 45-year-old female, was injected for the second time with Polycaprolactone-based dermal filler in her face.

She experienced progressive facial swelling and bruising to both lower eyelids.

She was administered systemic steroids however the swelling did not subside and progressively worsened. After 12 hours, a cutaneous rash developed on the lower half of the body and the patient presented at the Dermatology deparment. The clinical picture was characterized by painful hard oedema of the face (the forehead was spared), lower eyelid bruising, painful hard oedema of the dorsal surface of the wrists and hands, a polymorphic rash diffused mainly from the waist down with target-like lesions, palpable purpuric lesions, and urticaria-like lesions. The patient also complained of diffuse joint pain and limited range of motion.

Intravenous hydrocortisone sodium succinate 1g and Chlorphenamine 10mg were administered.

The bloodwork showed signs of systemic inflammation.

The patient was admitted to the Urgent Medicine Unit and intravenous systemic steroids were administered and the clinical picture subsided in 4 days.

Materials & Methods: NA

Results: NA

Conclusion:

In literature, only cases of local adverse events to Polycaprolactone-based dermal filler are reported. The facial oedema has been linked to an exaggerated immune response of the host. Our case can probably be linked to the same pathogenesis.

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Abstract N°: 2439

Hypersensitivity reaction due to hyaluronic acid fillers: A case report from Nepal

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Introduction & Objectives:

Use of fillers has become a popular rejuvenation technique in aesthetics throughout the world. However, for developing countries like ours, use of fillers is a relatively new treatment and is in its primitive phase. Delayed hypersensitive reactions to hyaluronic acid fillers are rare, but when occurs can have protracted consequences and stress to both the patient and the dermatologist. With this article, I would like to report a rare case of delayed hypersensitivity reaction secondary to hyaluronic acid filler used for facial rejuvenation in a patient.

The aim of this presentation is to report the adverse effects noted with hyaluronic acid so as to raise awareness of complications of hyaluronic acid fillers and to describe the hypersensitivity reactions associated with fillers from the literature.

Materials & Methods:

A 54-year-old female in good general condition came to our OPD for hyaluronic acid filler injection for her tear trough. After 3 days of fillers, she came back with bilateral lower eyelid oedema, erythema, pain, tenderness and mild fever. Suspecting infection, we treated her initially with oral antibiotics and antihistamine . Later we added prednisolone in our treatment. With increasing induration, erythema and pain, the lesion subsequently developing into fluctuating nodules. Recurrence of the nodules every 2-3 days following aspiration and hyaluronidase, we had to ultimately undergo excision and extraction of fillers. Over the course of the 2 months, the patient was seen 14 times for getting her treated with complications.

Results:

Hyaluronic acid fillers are most commonly performed cosmetic procedures due to its low antigenic potential and fewer side effects. With increasing use of fillers, reports of adverse effects have also risen. Several published reports suggested that infections, more commonly influenza virus infection and trauma, filler volume, repeat treatments, intramuscular implantation and the different properties of HA fillers may explain the etiology of hypersensitivity reactions due to HA fillers. In our patient, Flu like symptoms a few weeks back could be the possible cause for the trigger. But we could not investigate for Covid-19 as the patient denied any further test which does not contribute to the treatment of the complication.

Conclusion:

Careful history taking, patient selection and selection of fillers are essential to achieve desirable cosmetic results. Despite necessary precautions, it is difficult to predict the possibility of hypersensitivity reaction after the fillers. More clinical studies on larger patient populations from different brands of commercial fillers available is desirable before new fillers are marketed.

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Abstract N°: 2444

A Literature Review Investigating the Prevalence and Treatment of Vulvar Dermatoses in the UK with Home Remedies and Aesthetics

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Vulvar dermatoses refer to skin disorders affecting the vulva(Stockdale & Boardman 2018). According to the British Society for the Study of Vulvar Disease (BSSVD) (2022), at least 1 in every 5 (20% of women in the UK have vulvar dermatoses. Some of the common vulvar dermatoses include Vulvar eczema, Lichen simplex chronicus, Psoriasis, Lichen planus, skinfold dermatitis or Intertrigo and Vulvar lichen sclerosus (VLS). These disorders usually cause discomfort, soreness, burning and itching around the vulva. Vulvar dermatoses have different visible signs including lesions and changes in the skin color of. Although vulvar dermatoses may occur in younger females, the associated skin conditions usually are found among women at postmenopausal ages (Gorai & Lahiri 2022). While the exact cause of vulvar dermatoses is unknown, genetics or over-activeness of the immune system may play a significant role in developing these disorders. This review seeks to understand the existing home remedies and alternatives to address these vulvar dermatoses across the UK.

According to Gorai and Lahiri, Vulvar dermatoses happen when the vulva or the soft folds of the skin around the vagina turns painful, reddish, and itchy (Gorai & Lahiri 2022). Studies also indicate that vulvar dermatoses may be caused by wetness, heat, or reactions to some of the creams, soaps, clothing, spermicides, toilet paper or creams and lotions. The conventional treatment of vulvar dermatoses is the use of topical steroid therapy that reduces the inflammation and degree of itching (van der Meijden et al. 2022). Based on the type of vulvar dermatoses, the effective treatments range from Calcitriol (Silkis) or Calcipotriol (Dovonex) ointment to the Tacrolimus (Protopic 0.1%) ointment and Intralesional triamcinolone.

Credible articles and studies were searched from various databases including Cochrane Library, CINHAL, PUB-MED, Science-direct, Scopus and MEDLINE databases. All the documents to be used must have been published between 2007 and 2022. Also, the search was limited to research articles published only in the English language. Guidelines published by different institutions including the British Association of Cosmetic Nurses, the American College of Obstetricians and Gynecologists, the British Association of Cosmetic Nurses (BACN), the National Institutes of Health and the British Society for the Study of Vulvar Disease (BSSVD) were reviewed.

This review makes several conclusions on vulvar dermatoses. The review shows that nearly one in every five women across the United Kingdom and beyond has at one point in their lives been affected by at least one of the various vulvar skin conditions. These disorders usually cause discomfort and make them not to effectively perform their daily tasks due to embarrassment and lack of confidence, especially when the disorder causes scratching and constant discomfort.

Aesthetic dermatologists can recommend different types of unscented creams and lotions to help improve the appearance of the vaginal opening. For instance, topical steroid creams help in restoring the normal vulva skin strength and texture. This review also concludes that vulvovaginal aesthetics such as labiaplasty procedures and Clitoral hood reduction procedures might help with vulvar dermatoses. Non-surgical vaginal rejuvenation procedures including the Radio Frequency (RF) treatment and the CO2 Laser treatment can help in toning the vaginal area.

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Abstract N°: 2464

A dermocosmetic serum containing 15% of pure vitamin C and an anti-oxidant cocktail has long-lasting anti-oxidant properties and significantly improves skin qualities and sensitivity

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Introduction & Objectives:

The skin is exposed to exposome factors that aggress the skin and trigger oxidative stress resulting in skin ageing. In sensitive skin characterized by impaired skin barrier function and increased vascular reactivity, cosmetic solutions to reduce oxidative stress can go along with irritation. A dermocosmetic serum (VC serum) containing 15% pure Vitamin C and a cocktail of Vitamin E, maritime pine polyphenols, neohesperidin and fragmented hyaluronic acid was developed to limit the impact of exposome factors on sensitive skin.

Materials & Methods:

Two studies were conducted.

Study 1 assessed in 35 subjects with sensitive skin confirmed by lactic acid stinging test (LAST), skin brightness and radiance (ITA°, L*, a* and b* values, melanin (M*) value), skin moisture, and sensitivity as well as the skin haemoglobin content (e*-value) and TEWL during 4 weeks of daily use of VC serum in the morning.

Study 2 assessed the antioxidant benefit of VC serum on the sebum metabolite malondialdehyde from facial skins samples of subjects with sensitive skin proved by LAST. Half faces were treated with VC serum. Samples were obtained from treated and untreated sides at T0h, 4h and 6h.

Results:

Study 1: ITA° had significantly ($p<0.001$) increased as early as after 1 week, from 54.7 at baseline to 57.8 and reached 62.9 after 4 weeks (14.9% change from baseline). The L* value had increased and a* value had decreased significantly ($p\leq0.05$) after 2 weeks (4.1% and 5.0%, respectively); the b* value had significantly ($p<0.001$) decreased at Week 4 (16.2%); The M value had decreased by 3.6% ($p<0.05$) at Week 2. The skin moisture content had significantly ($p<0.001$) improved by 27.4%, 31.1% and 31.4%.

The skin was significantly ($p<0.001$) less sensitive as early as after 1 week (36.8% decrease), and after week 4 (59.6% decrease). The e*-value had significantly decreased after 1 week (5.7%, $p<0.05$) and 2 weeks (7.1%, $p<0.01$). TEWL had decreasing trends.

Study 2: The malondialdehyde concentration had significantly ($p<0.0001$) decreased in samples from the VC serum-treated side after 4 and 6 hours compared to T0 and the control side. In treated sides, the inhibitory rates of sebum oxidation to malondialdehyde were 65.8% after 4 and 54.1% after 6 hours.

Conclusion:

In facial skin, this 15% pure VC serum significantly prevents oxidation, has brightening and moisturizing effect, and may improve skin sensitivity. C1 - Internal use

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Abstract N°: 2548

ASIA syndrome associated with hyaluronic acid - two case reports

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Introduction & Objectives:

Injections with dermal fillers are one of the most frequently performed procedures in aesthetic medicine practice. Although facial filler treatments with hyaluronic acid are considered as minimally invasive, they could generate potential side effects including autoimmune systemic reactions in genetically predisposed individuals. Autoimmune/autoinflammatory syndrome induced by adjuvants (ASIA) is a rare condition that corresponds to a spectrum of immune-mediated disorders induced by chronic exposure to adjuvants. Symptoms may vary in individual patients and are not highly specific. Typical adjuvant substances include aluminum hydroxide in vaccines, silicone, paraffin, methacrylate, or polylactic acid.

Materials & Methods:

We present two cases of patients with ASIA syndrome associated with hyaluronic acid injections.

Results:

The first patient, a 28-year-old woman, experienced oedema, itchiness, numbness, increased warmth, and pain of her lips and chin. Additionally, the patient was suffering from fever, headaches, chronic fatigue, myalgia, arthralgia, xerostomia, and memory loss. Three weeks before the first symptoms appeared, she was administered hyaluronic acid-based filler in the lips and chin. The patient underwent a thorough medical investigation. Based on the clinical picture, the diagnosis of ASIA syndrome was made. Multiple injections with hyaluronidase turned as ineffective in reducing the complaints. She received treatment with systemic steroids and fexofenadine, with an initial improvement of her symptoms, which recurred each time after the dose was reduced. After a triamcinolone injection, a gradual resolution of symptoms was observed.

The second patient, a 34-year-old woman, presented with urticaria all over the body and chronic fatigue starting 3 months prior to the admission. In the laboratory tests, decreased complement C3 levels were present. The first symptoms appeared 2 months after a lip filler procedure with hyaluronic acid. Similar symptoms occurred 4 years earlier, likewise after a lip filler, which resolved after a hyaluronidase injection however, oedema of the lips occurred. In the presence of clinical findings, the diagnostic criteria of ASIA syndrome were met. Due to her previous reaction, injections with hyaluronidase could not be applied. The patient was managed with systemic steroids, fexofenadine, and cyclosporine with satisfactory results.

Conclusion:

Therapeutic options for ASIA syndrome remain limited. In selected cases, the removal of the offending agent might turn out beneficial. Practitioners must use dermal fillers with precaution and indicate expertise in avoiding, as well as coping with potential complications.

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Abstract N°: 2665

Eyelid Phenol Peeling as A Potential Alternative to Surgical Blepharoplasty: A Case Series

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Introduction & Objectives: Chemical peeling is a skin repairing technique which involves the use of chemical agents to peel damaged skin and allow for its re-epithelialization to improve skin appearance. This technique has been in use for the treatment of conditions related to hyper/hypopigmentation, scarring, solar damage, aging, pores, among others. Phenol has been used for deep peeling purposes for the treatment of conditions which involve the reticular dermis such as scars, deep wrinkles and lentigos. While deep phenol peeling is a relatively safe procedure, it is not devoid of complications. Patients who wish to undergo this procedure should be screened for the presence of any contraindications, and should be counseled on the possible complications which include arrhythmia, skin atrophy, scarring, acne eruption and infection. We hereby describe a new technique of eyelid phenol peeling, which, even when performed alone as a rejuvenation procedure, can achieve results potentially similar to blepharoplasties in terms of outcome.

Materials & Methods: We describe the cases of four women who underwent deep phenol peeling for the improvement of wrinkles and aging features around the eyelid area. Patients were previously healthy with no absolute contraindication for the procedure. They were instructed to use Kligman formula for one month prior to the phenol peeling. A non-steroid anti-inflammatory (Ketorolac Trometamol 10 mg) was given to the patient, sublinugal, 30 mins before starting the procedure. The skin was cleansed with urea foam for one minute and excess foam was removed with a dry gauze then a moistened gauze until the skin was clean of product. Alcohol 70% was used to clean the skin area in which peeling was desired. Phenol was applied using a damp cotton swab over multiple layers, until frosting was achieved. At the end of the procedure, a plastic occlusive mask was used to seal the area and a post-phenol occlusive ointment was applied over the periocular region. Patients were instructed not to wash the area for 7-10 days post-procedure and were prescribed Hyabak eye drops for dryness as well as oral analgesics as needed. No complications were reported in all cases. The patients were asked to score the cosmetic outcome after one month of treatment by choosing a number from 1 to 5, with 1 refering to a very unsatisfying outcome and 5 corresponding to a very satisfying outcome. They were also asked to provide their personal written feedback, if any. These data were collected anonymously through our patient feedback forms.

Results: All patients scored the outcome as either satisfying or very satisfying and when asked for additional feedback, two of them wrote being particularly satisfied because they don't have any surgical scars, one said the post-procedure period was difficult but worthwhile, and a fourth one mentioned she would recommend phenol peeling as an alternative for anyone considering surgical blepharoplasty.

Conclusion: Phenol peeling seems to be an easy, relatively safe, and effective deep peeling technique that can be used to achieve desired aesthetic outcomes in patients who wish to improve aging features and minimize the appearance of deep wrinkles without undergoing surgery.

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BERLIN 11-14 OCTOBER 2023
EUROPEAN ACADEMY OF DERMATOLOGY AND VENEREOLOGY

Abstract N°: 2699

Formulation of folic acid in niosomes for mature skin care

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Introduction & Objectives:

Folic acid is well know vitamin, promoting growth of skin cells by providing necessary material for DNA and RNA renewal. Due to its activity it's an excellent ingredient in anti-aging cosmetics.

The aim of this study was to investigate whether folic acid enclosed in special delivery system - niosomes exhibits better penetration abilities through stratum corneum then pure folic acid and to check anti-aging effect of niosomes with folic acid *in vivo*.

Materials & Methods:

A penetration study of folic acid (pure and enclosed in niosomes) was conducted. Niosomes (with 0.5% folic acid) and pure folic acid (0.5%) were applied to a StatM membrane for 3 hrs in the Franck chamber. Amount and depth of folic acid penetration was compared by microscope visualisation of dissected membrane.

Preliminary study on a group of 5 women (aged 23-43) were performed. Participants were asked to apply emulsion with encapsulated folic acid on left forearm and placebo on right forearm. Skin topography was evaluated before and after 2 hrs of single application using Visioscan.

Further, single-blind, split-face study was conducted in a group of 20 women (aged 49-69) who applied emulsion with encapsulated folic acid on the left eye area and nasolabial fold and placebo on right side, twice a day for 3 weeks. Skin instrumental evaluations of both tested sides were performed: topography parameters were analysed using VISIA, Primos, and VISIOSCAN systems; melanin content and elasticity were evaluated using Mexameter and Cutometer, respectively. At the end of the study participants completed a satisfaction questionnaire.

Results:

Our study revealed that encapsulated folic acid penetrated at least 2-fold deeper and in 2-fold greater amount into the StatM membrane, compared to pure folic acid.

Analysis of forearm skin topography after single use of emulsion with encapsulated folic acid revealed a decrease in number of irregularities and improvement in smoothness with increased moisture level compared to placebo.

Objective measurements on eye area showed that emulsion with encapsulated folic acid had better results than placebo version in terms of skin brightening, elasticity and reduction of wrinkles volume. Moreover, in some cases, decrease in depth and volume of nasolabial folds were observed.

Self-evaluation questionnaire revealed that just one use of emulsion with encapsulated folic acid moisturized and smoothed skin. After 3 weeks of product usage, volunteers reported improvement of skin moisturization and skin smoothness. Moreover skin around the eye was more radiant. Also reduction of under-eye shadows appearance was observed.

Conclusion:

Our studies indicate that folic acid enclosed in niosomes penetrates deeper and in greater amount to *sc* compared to pure form. Cream with encapsulated folic acid was well tolerated and displayed better results in instrumental measurements than placebo version. Obtained results indicate that the use of special carriers for vitamins, like folic acid, allowed to achieve better anti-aging effect.

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Abstract N°: 2762

Tolerance and efficacy evaluation of a new face night cream containing niacinamide (2%), hyaluronic acid (0.2%), retinaldehyde (0.1%) and adenosine (0.04%) on anti-ageing parameters and dermal matrix regeneration

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Introduction & Objectives:

The objectives of the clinical study were to assess the dermatological and ophthalmological tolerance and anti-ageing efficacy of the product.

Additional *ex*-vivo *and* in-vitro* studies were conducted to evaluate the dermal matrix redensifying effect and nutritive properties of the product.

Materials & Methods:

44 women, 45 to 65 years-old, (*mean age:* 56) were enrolled in an open, monocentric, non-controlled clinical study.

Subjects with all types of skin on face, wrinkles, sagging skin, dull and uneven complexion and declaring having sensitive skin were included.

The product was applied on face, neck and neckline once daily, on the evening, for 2 months.

Smoothing and anti-wrinkle efficacy were assessed by instrumental measurements using fringe-projection.

Anti-ageing efficacy was also assessed *via* clinical scoring on crow's foot wrinkles (using Bazin's scale from 0 to 6) and on skin smoothness, firmness and plumpness (using scales from 0 to 10). All evaluations were performed after 28 (D29) and 56 (D57) days of product use.

Moreover, dermal matrix regeneration evaluation was performed through dermal matrix synthesis markers' gene expression and quantification of the GAGs content on an *ex-vivo* skin model after repeated topical applications. In addition, nutritive property of the cream was assessed by quantification of neosynthesized lipids on reconstructed epidermis.

Results:

After 56 days of once daily use on face, neck and neckline, the anti-ageing night cream was judged having a good cutaneous tolerance and excellent ocular tolerance.

Fringe-projection assessment demonstrated a smoothing, anti-wrinkles effect of the product through a significant improvement of average roughness (-10% at D29 *(p=0.01)* and* -11% at D57 *(p=0.001)*) and average wrinkles' relief (-8% at D29 *(p=0.03)* and -11% at D57 *(p=0.001)*)

Dermatological clinical scoring showed a significant improvement of crow's feet wrinkles, skin smoothness, firmness and plumpness after 28 and 56 days of product use.

Repeated topical treatments on human skin explantsshowed an increase in expression of matrix synthesis genes

- Fibrillin 2, an elastin fibers related protein
- MRC2, receptor involved in collagen recycling
- HAS1 and HAS3, enzymes responsible of hyaluronic acid synthesis

These results correlated with the observed increase of +39%** of total dermal glycosaminoglycans quantified after repeated topical application of the cream.

In addition, essential ceramides, cholesterol, and free fatty acids increased after**topical treatments on reconstructed human epidermis**, with a 48-hour effect persistence. These results highlighted a long-lasting intense nourishing effect after 48 hours.

Conclusion:

This new dermo-cosmetic night cream showed efficacy on aging parameters (wrinkles, smoothness, firmness, plumpness) after 28 and 56 days of use and promoted dermal matrix regeneration and long-lasting intense nourishing effect on *ex-vivo* and *in-vitro* models.

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Abstract N°: 2819

ScaRemove protocol

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E- poster

Introduction & Objectives:

Acne scars removal using a combination of two different types of fractional laser beams in a 5 week treatment plan gaining total resurfacing.

Materials & Methods:

Laser resurfacing using a combination of two different types of fractional laser beams:

- Quanta System - Discovery Pico Series (picosecond)
- . Solta Medical - FRAXEL® DUAL 1550/1927 with Zimmer Cryo 6 Skin Cooling System
- Skinceuticals - Phyto Corrective Masque
- Dermaceutic - K Ceutic Post Treatment Cream

Treatment duration

- 5 weeks, including:
- One session of face Pico fractional laser treatment (session duration: 60 minutes)
- 4 weeks later one session of face Fraxel Restore laser treatment (session duration: 50 minutes)
- 7 days of recovery time.

Procedure description

Pre-treatment preparation

- Pre-treatment photographs were taken.

- Form of consent was signed by the patient.

- The patient removed all jewelry and makeup. Face was washed with a mild cleanser and water before treatment.

- An anesthetic cream was applied to the treatment area for 30-40 minutes.

Application of fractional laser

- Anesthetic cream was removed and the face was treated with an antiseptic solution.

- Laser safety googles were used by both the patient and the doctor.

- On the first laser treatment session: Application of Spot 8mm / Rate 10Hz / 0,4j / 1064 nm YAG / PS Pico fractional laser for 30 minutes* on the face, avoiding eye and lips areas.

-On the second laser treatment session: application of Energy 25mJ/ Treatment Level 8/ Passes 8 on the forhead-

nose-upper lip areas, Energy 35mJ/ Treatment Level 8/ Passes 8 on the cheeks and chin areas Fraxel Restore laser for 20* minutes, avoiding eye and lips areas.

- A cooling device was used to reduce the discomfort during the procedure.

*Treatment time depends on the areas being treated, but a full face will take approximately 30 minutes for both laser treatments. The pain associated with the procedure is dependent on the energy delivered to the treatment site.

Post-treatment and recovery

- A hydrating facial mask was applied on the face for 10 minutes to reduce burning sensation (Patients may

experience a mild to moderate sunburn sensation for about an hour after the procedure).

- A post-treatment repair cream with SPF was applied on the face.

- Patient experienced minimal pain and discomfort within the first hours after both sessions, oedema and erythema for 3-4 days and flaking of the skin, which was treated with a moisturizing cream.

- Pinpoint bleeding post-Pico Fractional laser treatment was also observed, following crusting that lasted up to 5 days.

- During the healing phase and for several months after treatment, it was recommended that the treatment area is protected using a moisturizing sunscreen with an SPF of at least 50+. Protective clothing and wide-brimmed hats should also be used to protect the skin from sun exposure.

- Patient followed a protocol of topical medication including La Roche-Posay - EFFACLAR Duo (+), La Roche-Posay

- ANTHELIOS SPF50+ for the following 3 months.

Results:

Decreased number of lesions with minimal macules and flat, narrowed acne scars, all over the face.

Marked improvement of the appearance of atrophic acne scars with reduction in depth and width, elimination of macules leading to overall improved skin tone and texture and healthier-looking skin.

Conclusion: The combination of the two lasers gained impressive results against acne scars in 5 a week's treatment plan.

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Abstract N°: 2822

Hyperpigmentation after epilation with Alexandrite laser

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Introduction: Epilation with laser is one of the most required treatments the last decade and is estimated to grow the following years. Despite the great results and the long experience in the field, still there are cases with burning and pigmentation post laser treatments. Although is a reversible side effect, patients are often concerned about their outcome.

Results: Our case is a female patient, skin type IV, underwent Alexandrite laser treatment for hair removal. The areas treated were the face, arms, armpits, bikini and legs. Intensity energy 10-12 J/cm2, 3 ms, 2 Hz was used, cooling 40/30 front and during process, hand piece size 18 for the legs and 12 for the face and armpits. The same program was used for all areas – Medium colored, Medium coarse hair, Skin type IV, No tan. There was no concern during the procedure, exception bikini area, which was more sensitive. The first sessions were held every 8 weeks distant from each other. The sessions had satisfactory results. After 4 months in October, the patient appears to do the fourth session. Treatment protocol used for skin type IV, medium coloured, fine hair, no tan. The next day, the patient appears with skin burns, coin and rings shaped, dark in colour, localized all over the forearms and the upper legs. She was asked if she had taken any pill or exposed to sun. She denied she may have taken any medication or been exposed to sun or tanning bed. The face, axillary and bikini area had no concern at all. The burn spots were covered with a crust, which after a few days was replaced by erythematous, paler spots. The patient was advised not to be exposed to the sun until the hyperpigmentation subsided and to use a cream with hyaluronic acid and silver sulfadiazine, once daily. To continue with an emollient based only with hyaluronic acid to nourish the skin and keep it hydrated. It was recommended not to perform laser sessions until the situation calms down completely. After a few weeks, the hyperpigmentation was replaced by hypopigmentation, which persisted for a long time. During this time, the patient was advised to start sun exposure every day. After 6 months, the skin does not have any hyperpigmentation/ hypopigmentation elements in the problem areas. Because of the presence of some fine, thin hairs and despite the side effect happened, at her request she underwent a low-intensity laser session, considering as a skin type V at 8 J/cm2. There were no side effects at all and the skin's reaction was good.

Conclusion: Epilation with laser is a treatment that requires proper training. It is important to adapt the right intensity according the phototype of the skin, the characteristics of the hairs (colour, width, type) and the anamnesis of the patients (medication, exposures). Follow up with the right recommendations help to improve and get the right outcomes, even if it takes time.

Keyword: Epilation, laser, hyperpigmentation

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Abstract N°: 2873

Objective Evaluation of the Efficacy of PDO (Polydioxanone) Threads for Facial Rejuvenation Through High Frequency Dermatological Ultrasound: A Case Report

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Introduction & Objectives: Facial cosmetic surgical techniques have emerged throughout the years to help people look younger and hide the physiologic, inevitable phenomenon of skin aging. One of these techniques is thread lifting, a non-invasive facial rejuvenation procedure with minimal side effects and good lifting outcomes. The absorbable threads made of polydioxanone (PDO) supposedly lead to collagen stimulation and improvement of pores and wrinkles, and in general, they are considered effective and safe with few to no side effects. The aim of this study is to objectively evaluate the efficacy of collagen stimulation through PDO threads, by measuring the thickness of skin layers (epidermis, dermis, and hypodermis) using high-frequency dermatologic ultrasound (22 MHZ).

Materials & Methods: This is the case of a 53-year-old previously healthy female patient with no previous facial surgeries, who underwent for the first time a facial thread lift. Under topical anaesthesia and within a sterile field, 11 threads were placed on every side of the face. The patient was prescribed antibiotics for 7 days and analgesics as needed, discrete hematomas were noted at entry points with bruising that resolved in few days. The patient was educated about postoperative trauma prevention, compressive dressing, rest, abstaining from physical activities and from sleeping in a prone position. The patient was followed up for 3 months post procedure. Using a high frequency ultrasound (22MHz), the size of each of the layers of the skin (epidermis, dermis, and subcutaneous tissues) was measured on the day of the procedure, on the seventh, thirtieth and sixtieth day after the date of the procedure in both the zygomatic and cervical topographies.

Results: A symmetric increase in the thickness of the dermis was noted in the zygomatic and cervical areas bilaterally and was maintained up to three months post procedure.

Conclusion: This case objectively illustrates the efficacy of collagen stimulation through the placement of polydioxanone threads, making it a good treatment option not only for its lifting effect but also for improving the texture and elasticity of the skin.

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Abstract N°: 2886

Treatment of Iron Infusion - Induced Hyperpigmentation with a Picosecond Nd:YAG 532 nm Laser

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Introduction & Objectives:

Intravenous iron infusion is a treatment option for iron deficiency when oral iron supplementation is not tolerated or is not effective. Accidental extravasation of iron containing particles into the dermis and subcutaneous layer causes a complication in the form of a iatrogenic tattoo in the area surrounding the injection site. The lesions tend to persist and have a negative psychological impact on the patient. There is no clear management protocol, however Q-switched laser treatment seems to be an effective option. Previous reports have focused on Q-switched and picosecond Nd:YAG 1064 nm, Alexandrite 755 nm and Ruby 694 nm lasers. Several treatment sessions were required. Although absorption peak of an iron molecule in conjunction with carbohydrates is said to be between 500 and 600 nm, authors had speculated that longer wave lengths are necessary to reach the extravasated iron particles in the deeper dermis and the subcutaneous layer [Eggenschwiler et al., 2019]. We would like to present a case where we have treated the iron extravasation with a picosecond Nd:YAG 532/1064 nm laser and compared the outcomes between both wavelengths.

Materials & Methods:

The patient (phototype II according to Fitzpatrick) presented with a brown, hyperpigmented patch on the left arm and the flexural surface of the elbow that developed 6 months ago as a complication of intravenous iron infusion due to severe iron deficiency postpartum. There were no signs of spontaneous resolution. The patient considered the lesion to be disfiguring and sought for a dermatological consultation. Treatment within several test patches with variable parameters was performed during the first session with a picosecond Nd:YAG 532/1064 nm laser to allocate the optimal treatment parameters. The residual hyperpigmentation was evaluated in 4 weeks and graded as (0 – clear, + - mild, ++ - moderate, +++ - severe) by the dermatologist.

Results:

After 4 weeks the lesion in the area that was treated with Nd:YAG 532 nm 1.5 J/cm2 was clear. The area that was treated with Nd:YAG 1064 nm 3.8 J/cm2 still had mild (+) residual hyperpigmentation left. Post-procedural purpura was present with both treatment parameters and resolved within a week. During the 4-week follow-up no complications were noted in both areas.

Conclusion:

Iron infusion-induced hyperpigmentation can be successfully treated in one session with a picosecond Nd:YAG 532 nm laser. Although Nd:YAG 1064 nm could require several treatment sessions for full resolution, it could potentially be safer for darker skin types. Further larger studies are essential to elucidate this.

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Abstract N°: 2955

ATE can speed up healing from fractional laser

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Abstract: EADV Congress, Berlin

Time: October 11 – 14, 2023

ATE can speed up healing from fractional laser

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Introduction & Objectives:

Fractional laser is an effective treatment for various skin lesions such as acne scars and trauma scars. However, the treatment usually needs to be repeated several times, and recovery from it may involve skin inflammation and redness that can last for weeks.

Adipose tissue and adipose stem cells are known to be able heal the skin and subcutaneous tissues. Adipose tissue extract (ATE) has the same regenerative properties, but it is a cell-free and allogeneic preparation, so it is a completely non-invasive treatment.

In this study, we investigated the safety and efficacy of ATE when used after fractional laser treatment.

Materials & Methods:

A total of nine patients were recruited for the prospective, randomized, split-defect pilot study (4 acne scars, 3 large trauma scars, 2 aging skin). The entire skin defect in all patients was treated with single fractional CO2 laser treatment, after which ATE was applied topically to one half of the area (split-face, split-scar) and sterile water to the other. The topical treatment was repeated once during the same day. The recovery of the skin from the laser (inflammation), as well as the final result of the treatment (scar healing etc.) were measured by a standardized assessment and photographs 6 weeks after the treatment.

Results:

In ATE treated side the treatment-related erythema was milder, and less scab formation was reported. As a subjective findings patients reported less pain and tightening in the skin. Overall, the post-treatment downtime was shorter on the ATE-treated side. In one patient, a significantly better final result was observed on the ATE treated side: lighter and softer scar.

Conclusion:

In conclusion, the combined use of this novel material (ATE) with resurfacing devices would provide synergistic

effects on both the efficacy and safety of treatments

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Abstract N°: 3059

Glomagiomyoma of the nail bed successfully treated using a 595-nm wavelength pulsed dye laser

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Introduction & Objectives:

Glomuvenous malformations (GVM´s), which include glomangiomas, glomangiomyomas, and glomus tumors, are a subtype of venous malformations histologically characterized by rows of glomus cells that surround distorted, thin-walled vascular channels. Sporadic, solitary GVM´s most commonly arise in the nail bed, manifesting as well-circumscribed, solitary blue-red subungual papules or nodules. Traditionally, the treatment of choice for these tumors has been surgical excision, but this approach may not be an option for patients who are not surgical candidates or when the tumor develops near functionally or cosmetically sensitive areas. Furthermore, surgery may result impractical and complex in cases presenting with multiple or large segmental lesions. Various non-surgical treatment options, such as electrodesiccation, laser and sclerotherapy have been described in the literature. Herein we present a case of a biopsy-proven solitary glomus tumor of the nail bed treated using a long-pulse 595-nm pulsed-dye laser (PDL), achieving excellent cosmesis and long-term remission.

Materials & Methods:

A 28-year-old woman presented to our consult reporting localized pain at the tip of her left, dominant thumb, associated with severe paroxysmal pain in response to temperature changes and local pressure, which had been gradually increasing over the last two years. Physical examination revealed no deformity, normal range of motion, and severe tenderness to palpation at the aforementioned location. Close inspection showed a millimetric, erythematous macule in the lateral side of the lunula. An outside physician had biopsied this lesion, which was histologically shown to be consistent with a glomangiomyoma. Since the patient refused to have the lesion surgically excised, she was referred to our practice for exploring alternative treatment options. A variety of therapeutic approaches were discussed with the patient, including electrodesiccation, laser and sclerotherapy. She finally decided to undergo laser treatment with a long-pulse 595-nm PDL. The treatment parameters (7-mm spot size, 20 J/cm2 of fluence, and 20-ms pulse duration) were determined based upon achievement of clinical endpoint (subtle purpura). Treatment sessions were performed at weekly intervals.

Results:

The patient tolerated the treatment well. A total of five sessions were required to achieve complete resolution of the lesion as well as the associated symptoms. There was no evidence of recurrence or scarring during a six months follow-up period.

Conclusion:

To our knowledge, this is the first report of a symptomatic glomangiomyoma located in the nail bed being successfully treated with a long-pulse 595-nm PDL with complete resolution of the symptoms and disappearance of the lesion itself. The satisfactory therapeutic response observed with the pulse dye laser could be attributed to the elimination of the large number of ectatic vessels characteristically present in this lesion, leading to the tumor shrinkage. Our experience provides further evidence to support the safety and effectiveness of PDL as an alternatve to surgical excision for the management of symptomatic and surgically challenging GVM´s. A larger

study is needed to establish the optimal settings and duration of treatment with the 595-nm wavelenght PDL for the treatment of these tumors.

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Abstract N°: 3071

Natural retinol analogs potentiate the effect of retinal on the skin

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Natural retinol analogs potentiate the effect of retinal on the skin

Introduction & Objectives:

Retinal (RAL) has proven equally effective as retinoic acid and retinol at reducing the clinical signs of age and photodamage but with a lower irritation potential. The effects of RAL, however, are not instant, with months of continuous use needed to see significant benefits. Because plants are a source of natural substances with retinol-like properties that can deliver anti-aging benefits without the side effects typically associated with retinoid use, we hypothesized that by combining two such analogs, bakuchiol (BAK) and *Vigna aconitifolia* extract (VAE), with RAL the anti-aging potential of RAL could be enhanced without compromising its preferential skin irritation profile. In this study we performed a comprehensive *in vitro* characterization of RAL with this combination of natural retinol analogs.

Materials & Methods:

Gene expression profiling of full thickness reconstructed skin treated with RAL and BAK or VAE was performed using a qPCR-based gene expression panel consisting of 5 endogenous control genes and 107 target genes that play important roles in skin biology (Standard skin panel; Genemarkers, Kalamazoo, MI). Retinol and retinoic acid were included as additional positive controls. Next, the irritative potential of the combination of RAL with BAK and VAE was determined in vitro by calculating the ET50 value based on the MTT viability assay. Finally, a whole transcriptome analysis of full thickness reconstructed skin treated with RAL in combination with BAK and VAE was performed using mRNA seq.

Results:

In vitro gene expression profiling suggested that BAK enhanced the effect of RAL on genes involved in keratinocyte differentiation and epidermal barrier function. In many cases the amplitude of expression with this combination was greater than that observed for retinoic acid. Similar effects were seen with VAE, with the combination of RAL and VAE enhancing the effect of RAL on numerous genes involved in epidermal barrier function.

The ET50's of RAL and the combination of RAL, BAK and VAE were similar (>24h), suggesting they have similar skin irritation profiles.

Expression of 1326 genes (680 upregulated and 464 downregulated) was modified upon treatment with the combination of RAL, BAK and VAE compared to vehicle-treated skin. Downregulated genes were significantly enriched in biological pathways controlling keratinocyte differentiation, lipid metabolism, and epidermal barrier function. Upregulated genes were significantly enriched in pathways involved in Wnt signaling and wound healing.

Conclusion:

These data suggest that the natural retinol analogs BAK and VAE can enhance the effects of RAL on the skin

without compromising its preferential skin irritation profile. Pathway analysis suggested they have a potent effect on biological pathways and processes important for skin aging and renewal.

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Abstract N°: 3095

Dr

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Introduction & Objectives:

Acne is a common disorder affect up to 80% of adolescent. Although post acne scars are common complication but there are no standardized treatment yet. This study aimed to compare the efficacy of microneedling with autologous platelet-rich plasma verses microneedling with topical insulin in the treatment of post-acne atrophic scars.

Materials & Methods:

In this split-face prospective comparative study, all patients were subjected to microneedling with insulin in the right side and microneedling with PRP in the left side of the face. The participants were experienced with 4 treatments sessions with one month apart. All patients were evaluated pre and post intervention. Optical coherence tomography (OCT) was used to evaluate the thickness of epidermis and dermis pre and post treatment. Side effects were observed in all session and 1 week after last session.

Results:

Sixty-one participants with a mean age of 30.9± 5.0 years were enrolled in this study. Men made up 34.4 % and women 65.6% , 40% of individuals had Boxscars , 31% had Icepicks , and 28% Rolling scars. Scar severity was the same on both sides.

Using Goodman & Baron grading system a significant improvement in the grades of scars, on both sides, in the favour of insulin treated side. After treatment, using OCT, insulin treated side had significant increase in thickness of epidermis and dermis than PRP treated side. Regarding adverse effects , there was no significant differentiation between insulin and PRP.

Conclusion:

Both PRP and topical insulin associated with microneedling represents promising treatments for post acne scars in favour of insulin.

Key words:

Post-acne atrophic scars, insulin, microneedling, PRP.

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Abstract N°: 3127

Treatments of Palpebral Congenital Melanocytic Nevus: A Systematic Review

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Treatments of Palpebral Congenital Melanocytic Nevus: A Systematic Review

Introduction & Objectives:

Palpebral Congenital Melanocytic Nevi (PCMN) is a rare congenital skin lesion affecting the eyelids that can lead to cosmetic and psychological concerns and potential health and functional problems, such as ptosis, ectropion, epiphora and amblyopia due to exophytic growth and cancer degeneration. Since the risk of malignancy can't be ruled out, surgeons advise its removal. There are several therapeutical strategies to PCMN exeresis: usually, treatment by surgical excision and full thickness skin grafts or local flaps, laser therapy, cryotherapy and dermabrasion. However, there was no consensus on the best therapy to treat PCMN.

This systematic review aims to evaluate and analyze PCMN treatment, recurrence rate and adverse events.

Materials & Methods:

We conducted a systematic review following PRISMA guidelines from October 2022 to April 2023. We included all types of study designs that described or compared PCMN treatments and interventions, as well as histology, recurrence, adverse events, patient satisfaction, and malignant transformation. The search strategy was based on specific search words through the following databases: PubMed, Embase, Lilacs, Web of Science and Scopus. Ongoing studies and gray literature studies were included. After the first and second selection processes, 25 case reports with 148 participants in total were included.

Results:

The effectiveness, success and satisfaction with various treatments for congenital melanocytic nevi depend on the specific treatment method and the individual patient's case. While some studies reported good results with various interventions such as surgery, cryotherapy, dermabrasion, full-thickness skin grafts, and certain types of lasers, others showed less promising outcomes. Various treatments for kissing nevus, including surgical excision and laser therapy, have been associated with a range of adverse effects. Surgical excision had satisfactory outcomes in terms of appearance but had complications such as ectropion and pigmentation. Laser therapy had good results but had some risks such as erythema and hypopigmentation. CO2 and Er:YAG lasers used together had excellent cosmetic and clinical results with reduced risks. Recurrence of nevi after treatment was reported in some cases, highlighting the need for careful consideration of the specific case and treatment method.

Conclusion:

Most of the studies showed that surgical procedures (exeresis) are able to treat PCMN in the eyelid. The variability in outcomes emphasizes the importance of further research to better understand the most effective and safe approaches for treating CMN.

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Abstract N°: 3194

Phenol Peel and Dermabrasion for Rhinophyma Correction - A Case Report

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Introduction & Objectives:

Rhinophyma is a disfiguring skin condition characterized by progressive enlargement of the nasal region. Surgical treatment options, such as excision, can result in scarring and deformities. This study aims to evaluate the efficacy and safety of combined dermabrasion and phenol peel treatment for rhinophyma, with a focus on aesthetic outcomes and patient satisfaction.

Materials & Methods:

A male patient, 78 years old, presented with long-standing exophytic rhinophyma causing significant aesthetic discomfort and social stigma. The patient underwent a combined dermabrasion and phenol peel procedure in a single session. Postoperatively, the patient was monitored for complications and evaluated for wound healing and overall satisfaction.

Results:

The combined dermabrasion and phenol peel treatment resulted in satisfactory aesthetic outcomes for the patient. One week after the procedure, good fibrotic healing and a noticeable improvement in the exophytic aspect of the rhinophyma were observed. The patient reported a high level of satisfaction with the results.

Conclusion:

Combined dermabrasion and phenol peel treatment appears to be an effective and safe approach for managing rhinophyma, providing satisfactory aesthetic outcomes and minimizing the risk of scarring and deformities associated with conventional surgical techniques. Further studies are needed to assess the long-term efficacy and safety of this technique. Individualized treatment selection should consider patient characteristics and medical conditions.

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Abstract N°: 3244

Granuloma after PDO Thread or Basal Cell Carcinoma? A Case Report

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Introduction & Objectives:

PDO threads are synthetic threads made of a non-allergenic and non-pyogenic polymer called polydioxanone. They are widely used in minimally invasive aesthetic procedures, offering advantages such as shorter recovery time and lower cost compared to surgical interventions. However, complications associated with PDO thread procedures, including hematomas, edema, skin waviness, infections, inflammations, thread extrusions, and granulomas, have been reported. This study aims to discuss the potential adverse effects of PDO threads and highlight the importance of considering granulomas as differential diagnoses for cutaneous lesions following aesthetic procedures.

Materials & Methods:

A 55-year-old female patient underwent rhinomodeling with polydioxanone (PDO) threads inserted into the distal region of the left nasal dorsum. The patient experienced inadequate healing in the area and developed pruritic hardened nodules. Dermatological examination revealed a hyperemic pearly papule with arborizing vessels on the left nasal tip. A biopsy of the lesion was performed, confirming the presence of birefringent foreign body material (surgical thread). Subsequent excisional biopsy of the granuloma resulted in complete improvement and satisfactory healing.

Results:

PDO threads have gained popularity in facial rejuvenation procedures due to their advantages over surgical interventions. They stimulate local collagen production through a mild inflammatory response, leading to long-term collagen deposition. However, adverse effects can occur, including granuloma formation. Complications such as hematomas, edema, abscesses, thread extrusions, and granulomas have been reported. It is essential for dermatologists and practitioners to be aware of these complications and consider granulomas in the differential diagnosis of cutaneous lesions following PDO thread procedures.

Conclusion:

PDO threads are increasingly used in aesthetic procedures due to their minimally invasive nature and cost-effectiveness. However, they can lead to complications, including the formation of granulomas. Dermatologists and practitioners should be cautious and consider the history of aesthetic procedures when evaluating patients with cutaneous lesions. The awareness of potential adverse effects and the inclusion of granulomas in the differential diagnosis are crucial for the proper management of patients undergoing PDO thread procedures.

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Abstract N°: 3279

High-Frequency Ultrasound for Skin Laxity of the Face and Neck: A Five-Year Review

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Introduction & Objectives: High-frequency ultrasound technologies for noninvasive cutaneous rejuvenation of the face and neck include microfocused ultrasound and, more recently, synchronous parallel-beam ultrasound. While these two technologies share similar mechanisms, key differences exist between them. Much of the current literature on high-frequency ultrasound pertains to microfocused ultrasound. The aim of this study was to consolidate recent literature pertaining to high-frequency ultrasound in treatment of facial and neck laxity.

Materials & Methods: A PubMed search was conducted using the algorithm: ((microfocused ultrasound) OR (synchronous ultrasound parallel beam) OR (HIFU) OR (high intensity focused ultrasound) OR (focused ultrasound) OR (high-intensity ultrasound) OR (parallel beam ultrasound)) AND ((cutaneous) OR (cosmetic) OR (skin) OR (dermatology)) AND ((face) OR (neck)) AND ((collagen stimulation) OR (histology) OR (rhytids)) AND ((depth) OR (1.5 mm) OR (3 mm) OR (4.5 mm)). Inclusion criteria included full text clinical studies. Exclusion criteria included literature reviews, meta-analyses, retrospective studies, case reports, letters, studies not related to key words, studies conducted in a language other than English, studies investigating high-frequency ultrasound combined with other therapies, studies not pertaining to high-frequency ultrasound applied to the face and/or neck, cadaveric or animal studies, and studies published before 2018. Author names, study type, objectives, methods, and key findings were reported for each study included in this review.

Results: A total of 81 articles were identified through the PubMed search algorithm. One article was not full text and was thus not included in further screening. 80 articles were screened using inclusion and exclusion criteria. Following screening, eight articles underwent in-depth review as part of this study. Six studies investigated microfocused ultrasound, while two investigated parallel-beam ultrasound.

Conclusion: Although high-frequency ultrasound is increasing in prevalence as a treatment for laxity of the face and neck, further clinical investigation is needed to characterize how this technology can provide maximal cosmetic benefit.

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Abstract N°: 3597

Sphingomonas xenophaga from La Roche Posay thermal spring water is a new cosmetical ingredient to tackle cutaneous vascular disorders involved in rosacea

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Introduction & Objectives:

We isolated and fully characterized a flagellated bacterial strain of *Sphingomonas xenophaga* from the endogenous flora component of La Roche Posay theram spring water. We then developed an industrial fermentation process that guarantees the production of a robust, reproducible biomass from this Sphingomonas strain in order to evaluate the biological impact of the Sphingomonas extract on vascular skin parameters *in vitro* and *in vivo*. We focused on the kallikrein activity and the potential effect on vascular disorders to alleviate rosacea symptoms.

Materials & Methods:

In vitro study: effect of the extract Sphingomonas on the kallikrein - kinin system: the activation of prekallikrein is evaluated after 10 min of incubation of a normal plasma with the extract at test at 0°C at concentrations of 0, 0.02, 0.1, 0.2, 0.3, 0.4 and 0.5% followed by full activation prekallikrein thanks to dextran sulphate. The enzymatic activity is monitored by spectrophotometry using a chromogenic substrate.

In vivo study: the randomized double-blind clinical study was conducted on 86 Caucasian female subjects presenting sensitive and reactive skin with permanent redness and vascular disorder on face. They were divided in two groups of treatment. Instrumental evaluation of vascular disorders has been done by Dermascore after 28-days treatment.

Results:

As expected from such a flagellated microorganism, *in vitro* data on isolated skin cells in culture indicated a triggering of both TLR2/4 and TLR5 innate skin immune pathways in Normal Human Skin Keratinocytes (NHEK), with respectively EC50 = 6 µg/mL for TLR2 and EC50 ~ 400 µg/mL for TLR5. On plasma model, Sphingomonas ferment extract inhibited the activation of the kallikrein system kinin. The inhibitory effect is observable from a concentration of 0.4 %. Inhibition of the kallikrein system is 49 +/- 8 and 90 +/- 8% at the final concentration of 0.4 and 0.5 % ($p<0.001$). This pre-Kallikrein activity is an enzymatic machinery normally present in the skin and the plasma and converts pro-bradykinin into the inflammatory vasoactive bradykinin moiety. Since in skin Bradykinin is involved in skin red flushes and vasodilation, we thus investigated whether the newly isolated biomass INCI name Sphingomonas ferment extract could modulate skin inflammation and redness parameters *in vivo*. The randomized clinical study showed significant resolving effect on vascular disorder after 28 days of topical application of 2% Sphingomonas ferment extract (-10% compared to baseline; and significant difference compared to the vehicle -adjusted p-value: 0.038).

Conclusion:

These unique properties on Kallikrein activities together with TLRs-inducing innate immune responses make this Sphingomonas ferment extract a potentially new active ingredient alone or in combination with other soothing agents to target skin inflammatory pathways and to help resolve intolerant skin vascular disorders involved in rosacea.

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Abstract N°: 3723

the effect of polylactic acid on dermal thickness

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Introduction & Objectives:

As people age, their skin naturally loses volume, elasticity and becomes thinner, leading to wrinkles and sagging. Various cosmetic procedures, including injectables such as Sculptra, have been developed to combat these signs of aging. Sculptra is a poly-L-lactic acid (PLLA) that is FDA-approved for the correction of facial volume loss. The purpose of this study is to evaluate the effect of polylactic acid on the thickness of the dermis in a controlled and measured way.

Materials & Methods:

A total of 5 patients were recruited to participate in this study. Prior to the first injection, a facial ultrasound was performed to measure the thickness of the dermis. Patients had then receive two injections of Sculptra at 45-day intervals. During the study, no other injectable procedures had been performed on the patients to minimize the impact of external factors on the results. The patients are of varying ages, and several areas had been evaluated, including the face, neck, décolletage, and knee.

Results:

The thickness of the dermis was evaluated through both ultrasonic imaging and macroscopic examination. Ultrasonic imaging was performed to capture images of the treated areas at each time point, and macroscopic examination were conducted to assess the skin quality, including wrinkles, texture, and tone.
Photographs were taken before and after the treatment to further document the changes in the treated areas.

The results of this study highlighted significant improvements in the dermis.

The quality of the skin has increased a lot, the results being obvious both macroscopically and sonographically.

At the level of the neck, the thickness of the dermis increased from 1.1 mm to 1.9 mm in the case of a 56-year-old woman, and in most cases the increase was in proportion of 50%.

Conclusion:

In all cases studied, the quality of the dermis improved remarkably, bringing aesthetic benefits to the areas we injected.Because majority of the pacients wants a natural look , I believe that this approach of targeting the quality of the patient’s skin without changing the proportions and physiognomy through too much volume, creates a harmonious appearance for the patients.

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Abstract N°: 3767

Abobotulinum toxin A intradermal injections in patients with acne

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Introduction & Objectives:

In recent years, clinicians have investigated an increase in the off-label use of botulinum neurotoxin (BoNT) in dermatology. Our aim is to review published data on acne and skin oiliness treatment with BoNT and to measure pH, moisture, oiliness and elasticity of the skin of our patients before and after intradermal BoNT injections.

Materials & Methods:

The articles with the keywords “acne treatment with BoNT” and “BoNT treatment for oily skin” were obtained from the PubMed and Cochrane databases and analysed.

Four female subjects with I and II stage of acne were enrolled in our study. The inclusion criteria were female, 18 years or older, non-smoker for at least one year before the study. The exclusion criteria were spreading infection in the target area, previous treatment with BoNT in the target area, treatment with isotretinoin within the previous 24 months, pregnancy or lactating, hypersensitivity to BoNT or any of its components. All the study subjects signed an informed consent.

The face of each subject was cleansed with isopropyl alcohol. Then, the forehead, left and right cheek and chin of each subject were injected intradermally with hyperdiluted Abobotulinum toxin A (ABO) using a 30G needle. Each face area was injected with 10U of ABO, counting 40U as the overall dose for one patient. The subjects returned for their follow-up 4 weeks after the initial injection. Their skin was photographed, pH, moisture, skin oiliness and elasticity of the skin were measured using Callegari “Soft Plus” skin assessment device.

Results:

Acne is found to be one of the conditions where BoNT can be beneficial in reducing face oiliness and pore size. Pore size and sebum production are dependent on several factors. One of the factors is the activity of the arrector pili muscle and the activation of local muscarinic receptors in the pilosebaceous unit with acetylcholine. These insights suggest that botulinum neurotoxin type A may reduce sebum production by binding to the cholinergic receptors on the sebaceous glands and interfering the signal between the sebaceous glands and the autonomic nerve terminals. Unfortunately, there is no standartized effective dose for treating oily skin and acne. Our study with 40U dose of ABO demonstrated a slight increase of pH and skin moisture and decrease of oiliness and elasticity in 75% of the subjects. However, all patients noted their skin oiliness and rashes were reduced.

Conclusion:

There is an increasing amount of evidence that BoNT is useful in treating patients with various types of acne. The study demonstrated a slight decrease of skin oiliness, thus suggesting that more research is needed on the dosage of BoNT for treating different stages of the disease.

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Abstract N°: 3833

a comparative study on the efficacy of two medical dressings for post-intense pulsed light therapy repair

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Introduction & Objectives:

IPL therapy is a popular facial rejuvenation treatment addressing various skin issues and improving skin smoothness and firmness. Its non-invasive nature, minimal pain, and fast recovery have made it popular among beauty-seekers. However, temporary discomfort and symptoms may occur post-treatment. Using medical skincare products for cooling and moisturizing can alleviate discomfort and reduce symptoms. Hyaluronic acid and collagen are crucial for skin barrier repair, with collagen-based dressings improving post-IPL discomfort and erythema, while hyaluronic acid-based dressings provide a moist healing environment. This study investigates the clinical efficacy, skin tolerability, and patient satisfaction of these two medical dressings for post-IPL therapy repair to determine the most suitable option to improve patient outcomes and satisfaction.

Materials & Methods:

This prospective, interventional study compares two medical dressings, A (Hyaluronic acid dressing) and B (Collagen Dressing), in post-IPL therapy repair. Participants undergo IPL treatment on both facial sides and randomly apply dressings A and B on each side. Assessments include pain, redness, swelling, and skin barrier function before treatment (T0), immediately after (T1), and one hour after treatment (T2). Objective indicators include skin color index (a-value) and VISIA imaging. Subjective indicators involve participant questionnaires and researcher evaluations, with scores from 0 (none) to 10 (severe). Tolerability, adverse reactions, and satisfaction are assessed at T2. Data will be analyzed using SPSS26.0 with appropriate statistical tests for normal and non-normal distributions. A p-value <0.05 will be considered statistically.

Results:

A total of 34 participants were initially enrolled in this study, but two were excluded due to incomplete data collection, leaving 32 subjects for statistical analysis. The experiment evaluated the effect of hyaluronic acid and collagen medical dressings on skin erythema (a-value) after intense pulsed light treatment. There was no significant difference in a-value between the two groups immediately after treatment (T1, $P>0.05$), indicating comparability.

Thirty minutes after applying the dressings (T2), both groups showed a significant reduction in a-value ($P<0.05$). There was no statistically significant difference between the two groups in the degree of a-value reduction ($P>0.05$).

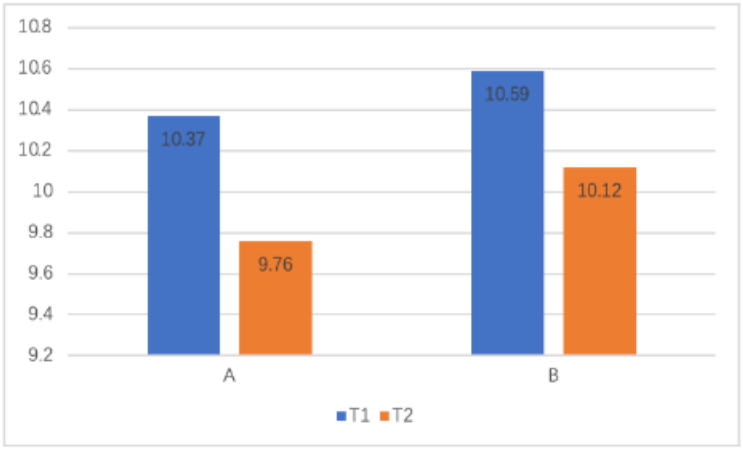

Figure 1 illustrates the changes in erythema index values immediately after treatment (T1) and after applying the two medical dressings (T2).

In addition to the objective measurements, the study assessed subjective ratings of skin tightness, pain, and other symptoms reported by the participants. Both researcher-assessed and participant-reported scores indicated that there was no significant difference between the A and B groups in terms of skin condition improvement.

Conclusion:

Both medical dressings, one with hyaluronic acid and the other with collagen as the core ingredients, are effective in improving skin erythema, alleviating postoperative swelling, and reducing pain following intense pulsed light treatment. No significant differences were observed between the two groups. No participants experienced itching, burning, or pain during the use of both dressings, indicating good tolerability.

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Abstract N°: 3836

the efficacy and safety of sodium hyaluronate medical wound dressing for relieving skin sensitivity: a self-controlled, prospective clinical study

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Introduction & Objectives:

Sensitive Skin (SS) is a common cutaneous sensory syndrome characterized by low tolerance and high reactivity to various normally harmless stimuli, accompanied by various subjective discomforts such as stinging, burning, pain, and itching, with or without objective signs such as erythema, scaling, and telangiectasia. Seasonal changes, particularly during spring-summer and summer-autumn transitions, are associated with a higher incidence of sensitive skin. Current research suggests that the occurrence of sensitive skin is the result of interaction between impaired skin barrier and neurovascular dysfunction. The main treatment principles include avoiding stimuli, rebuilding the skin barrier, reducing neurovascular hyper-reactivity, and controlling inflammation. This study investigates the use of sodium hyaluronate medical wound dressing for treating sensitive skin populations.

Materials & Methods:

This study involved 30 patients with sensitive skin who were selected based on specific inclusion and exclusion criteria during the autumn season in the Nanjing, as a Jiangnan region of China. The participants applied a sodium hyaluronate medical wound dressing to their skin over a 28-day period, with a more frequent application during the first 14 days. Skin barrier repair function was evaluated by measuring stratum corneum hydration and transepidermal water loss (TEWL) under controlled temperature and humidity conditions. Patients completed questionnaires at weeks 0, 2, and 4 to provide insight into their subjective experiences. Additionally, any adverse skin reactions were carefully observed and recorded throughout the trial. The primary objective of the study was to determine the effectiveness and safety of the sodium hyaluronate medical wound dressing for individuals with sensitive skin.

Results:

Out of 30 patients initially enrolled, 29 completed the clinical observation and follow-up, with one dropout (3.3%) due to personal reasons. All participants were female (100%), aged between 22 and 56, with an average age of 37.93 years.

As shown in Figure 1, after two weeks of treatment, no significant difference in cheek hydration levels was observed ($p>0.05$). However, after four weeks, a slight decrease in hydration levels was noted, with a statistically significant difference ($p<0.05$).

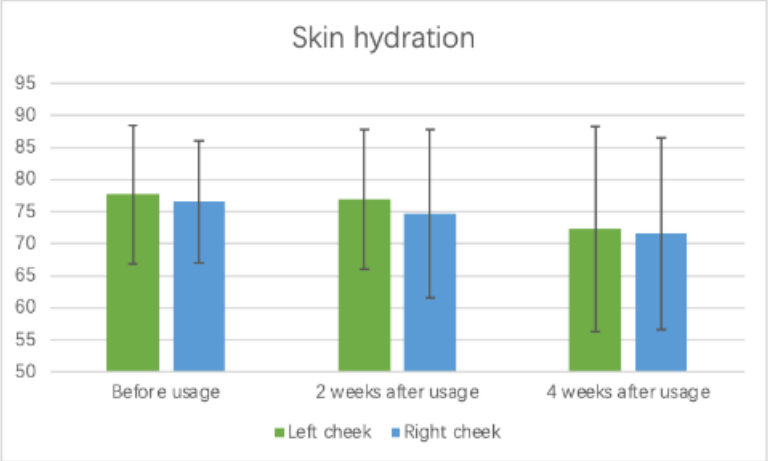

Figure 1 Differences in skin hydration on both sides of cheek before and after usage

As shown in Figure 2, no significant difference in TEWL was observed after two weeks of treatment ($p>0.05$). After four weeks, a slight increase in TEWL was noted, with a statistically significant difference ($p<0.05$).

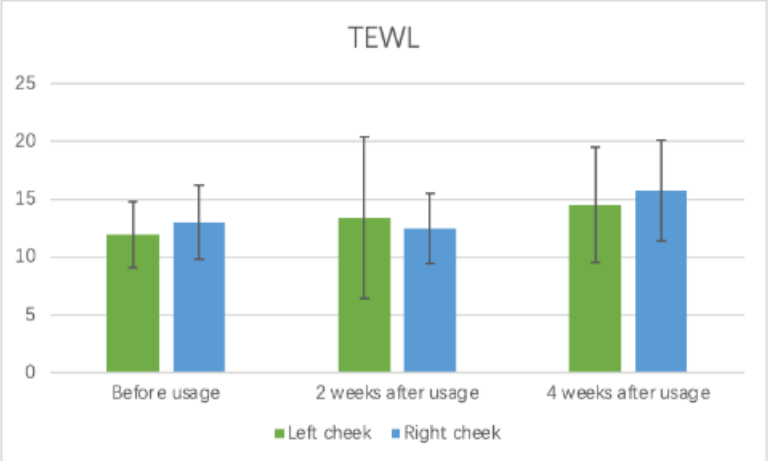

Figure 1 Differences in TEWL on both sides of cheek before and after usage

Through questionnaires, patients self-assessed facial discomfort on a scale of 0-9. Results showed significant improvement in tightness, dryness, scaling, burning, stinging, itching, redness, erythema, and telangiectasia after two weeks ($p<0.05$). After four weeks, scores continued to decrease, except for erythema and redness, which showed no significant change ($p>0.05$).

Conclusion:

In summary, the application of a medical wound dressing with sodium hyaluronate on sensitive skin effectively alleviates patients' subjective discomforts such as dryness, burning, stinging, and itching. It also increases skin hydration, reduces telangiectasia, and suppresses inflammatory responses.

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Abstract N°: 3837

clinical observation on the effect of a medical wound dressing on immediate repair of skin barrier after intense pulsed light procedure

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Introduction & Objectives:

Intense Pulsed Light (IPL) is a high-intensity light source that stimulates dermal collagen changes through photochemical reactions, selectively treating skin conditions such as telangiectasia, pigmentation, wrinkles, and acne. IPL therapy is precise and safe; however, due to its thermal and biological effects, many patients experience post-treatment skin barrier damage. Rapid skin repair immediately after IPL treatment minimizes post-treatment damage and maximizes therapeutic benefits. The core ingredients of the test medical wound dressing, sodium hyaluronate, and menthone glycerin acetal, maintain tissue hydration, promote wound healing, and rapidly restore the skin barrier. This study investigates the efficacy of the medical wound dressing with hyaluronic acid in patients immediately after IPL treatment, and the results are reported herein.

Materials & Methods:

Thirty patients who underwent intense pulsed light (IPL) therapy at a skin laser and aesthetic center were selected. Participants were aged between 21 and 39 years and exhibited symptoms such as erythema, edema, dryness, scaling, itching, burning, stinging, and tightness after IPL therapy. After IPL treatment, participants applied the medical wound dressing to one side of the face for 20 minutes (test side) and an ice pack to the other side (control side). They completed questionnaires evaluating subjective sensations on both sides of their faces at three time points: immediately after treatment, 10 minutes after, and 20 minutes after removing the dressing. Adverse reactions were recorded, and statistical analysis was conducted using GraphPad Prism 7.0 software.

Results:

The results demonstrated that using the medical wound dressing after intense pulsed light laser therapy significantly improved skin dryness, tightness, and burning sensation after 10 minutes of application when compared to the ice pack. Furthermore, after 20 minutes of application, there was a significant improvement in erythema, dryness, burning sensation, and tightness. Although there were no significant differences between the wound dressing and the ice pack in terms of improving itching and stinging sensations, the wound dressing did show a trend of improvement for these symptoms. The data are shown in Table 1.

Table 1: Comparison of the progress rate of symptom scores between La Roche-Posay medical wound dressings and cold compresses at 10 minutes (T1) and 20 minutes (T2) postoperatively

Index	Comparison with T0 baseline	Progress rate				
		Test group	Control group	Total	Statistics	P value
Skin redness	T1	0 (0.00)	4 (13.33)	4 (6.67)	2.411	0.1205
	T2*	0 (0.00)	6 (20.00)	6 (10.00)	4.63	0.0314
Dry skin	T1*	0 (0.00)	9 (30.00)	9 (15.00)	8.366	0.0038
	T2*	0 (0.00)	10 (33.33)	10 (16.67)	12	0.0005
Skin burning	T1*	0 (0.00)	8 (26.67)	8 (13.33)	7.067	0.0079
	T2*	0 (0.00)	7 (23.33)	7 (11.67)	5.822	0.0158
Skin itching	T1	1 (3.33)	3 (10.00)	4 (6.67)	0.268	0.6048
	T2	2 (6.67)	6 (20.00)	8 (13.33)	1.298	0.2546
Skin stingling	T1	0 (0.00)	4 (13.33)	4 (6.67)	2.411	0.1205
	T2	0 (0.00)	4 (13.33)	4 (6.67)	2.411	0.1205
Skin tightness	T1*	0 (0.00)	10 (33.33)	10 (16.67)	12	0.0005
	T2*	0 (0.00)	9 (30.00)	9 (15.00)	8.366	0.0038

Note: Corrected Chi-square test, * represents a statistically significant difference (P<0.05)

In the tolerability assessment, it was found that 96.7% of the subjects tolerated the test wound dressing well, with 83.3% of them indicating that they found it very tolerable. A total of 90.0% of the subjects reported feeling comfortable using the dressing, with 40% of them stating that they felt very comfortable. The satisfaction rate for using the wound dressing was 100%, with 60% of the subjects indicating they were very satisfied. Additionally, 90% of the subjects expressed their willingness to continue using the wound dressing as a part of their daily skincare routine.

No adverse events were related to the use of the test wound dressing product.

Conclusion:

The test medical wound dressing, when applied after intense pulsed light laser therapy, can help alleviate postoperative skin symptoms such as erythema, dryness, burning, and tightness. It helps improve damaged skin barriers and promotes skin barrier repair.

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Abstract N°: 3979

The science of topical retinol-like activity compounds in skin aging

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Introduction & Objectives:

UV radiation is one of the main contributors to skin photoaging, causing thickened epidermis, loss of collagen, elastin and other extracellular matrix proteins among other defined markers. Retinoids have proven to be effective as skin photoaging treatment. However, undesired side effects limit their use in skin care routines, and new actives are required to avoid these side effects while keeping good antiaging efficacy. Here, we show that a combination of 3 compounds (0.3% retinol, 0.7% bakuchiol and a post-biotic complex) has higher in vitro efficacy than retinol alone and shows significant antiaging activity in ex vivo models and volunteers.

Materials & Methods:

At the in vitro level, Human dermal fibroblasts were incubated for 24h with retinol or the combination for wound healing assay or qPCR assay of skin regeneration and aging genes. Cells were also incubated for 24h with a combination of anti-irritant agents for qPCR assay of skin irritation and inflammation genes. Reconstructed human full thickness skin model was used. The combination was tested in a reconstructed human full thickness skin model. After 8 days, immunodetections of Ki67, collagen IV, filaggrin and cytokeratin 14 were performed.

At the clinical level, 10 females of phototype I-IV and over 35 years of age with signs of moderate-severe aging were included in a clinical study. Volunteers applied the topical treatment every other night the first two weeks to first allow skin adaptation and every night the last two weeks. The efficacy assessment methods used were cutometer®, photography with VISIA® and SLR camera. Safety events and subjective surveys were also recorded.

Results:

The combination of 3 compounds showed positive effects on the wound healing assay, while retinol alone showed no effect. This combination also increased the expression of ELN, FN1, FGFb, TGF-B1, TIMP1, TIMP3, GPX3, GSTT1, HO-1, SOD1, SOD2, ATG5, ATG7, ATG12, BECN1, LC3B and p62, while retinol alone slightly induced the expression of FN1, TGF-B1, GPX3 and HO-1. On the other hand, the combination of anti-irritant compounds with retinol decreased retinol-induced irritation genes (CGRP, COX-2, IL-6, MCP-1, RIS-1). In the ex vivo studies, an increase in all 4 biomarkers was observed when treated with the combination compared to untreated controls. In addition, a significant increase in epidermal area was observed in tissues treated with the combination.

At day 15 all volunteers showed local skin reactions that were expected according to the treatment: mild erythema, mild/moderate dryness, mild scaling, mild stinging. At day 28, more than 43% of patients showed improved elasticity, 100% reported very good tolerability and satisfaction rate, and 80% demonstrated to have a more elastic, brighter, firmer, and smoother skin.

Conclusion:

The novel combination of compounds presented here shows good skin regeneration and antiaging efficacy in vitro compared to retinol alone, and thus proves to be a good alternative for skin photoaging treatment. Besides, the anti-irritant compounds decrease the irritant effects of retinol, thus reducing the side effects commonly caused by retinoids. In addition, the combination also proved to be effective ex vivo, demonstrating the ability to

penetrate the skin. The proposed combination is presented as an effective candidate for improving the epidermal structure in anti-aging treatments and proved to be clinically safe and efficient.

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Abstract N°: 4038

Effectiveness and Safety of Small-Particle Cross-Linked Hyaluronic Acid Dermal Injection for Facial Skin Quality Improvement: a Non-Interventional, Retrospective Study

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Effectiveness and Safety of Small-Particle Cross-Linked Hyaluronic Acid Dermal Injection for Facial Skin Quality Improvement: a Non-Interventional, Retrospective Study

Introduction & Objectives:

Small-Particle Cross-linked hyaluronic acid (SPCLHA) injection is a widely used procedure for multiple cosmetic purposes. A recent application of SPCLHA injection is for improving facial skin quality, but there is a paucity of evidence supporting its clinical use in the real world. This study aims to evaluate the effectiveness and safety of a SPCLHA dermal filler for skin quality improvement in adult Chinese patients.

Materials & Methods:

We retrospectively collected real-world data of Chinese patients aged ≥18 years who received at least two facial injections of SPCLHA from June 1, 2020 to January 31, 2023. The main effectiveness outcomes were aesthetic facial skin improvement, evaluated by an independent evaluator using the Global Aesthetic Improvement Score (GAIS) and the 5-Point Global Photoaging Score (GPS). The GAIS score (ranging from -1 to 3) was determined by comparing a patient's facial photographs in the current visit with the previous one. A score of ≥ 1 represented skin improvement. Higher GPS score represented more areas of visible photoaging signs (e.g. wrinkles). Safety was measured by the incidence of adverse events during the study period. Patient satisfaction was collected in their last visit.

Results:

A total of 39 female Chinese patients were included. Eligible patients had a mean (standard deviation [SD]) age of 38.7 (7.9) years and mode GPS score of 3.0 at baseline. The mean (SD) injection interval was 42.7 (14.0) days between the 1st and 2nd injection and 50.0 (33.2) between the 2nd and 3rd. After the 2nd injection, 100% of patients reached a GAIS score of ≥ 1. After the 2nd and 3rd injection, the respective proportions of patients with score 2 or 3 were significantly higher than that after the 1st injection (both $p<0.001$) (Table 1). Moreover, there was an upward trend of the median GAIS scores from the 1st to the 3rd injection, which suggested that continuous injections of SPCLHA might result in incremental aesthetic improvement (Figure 1). Compared to baseline GPS distribution, there was a significantly greater proportion of patients with score 2 and smaller proportion with score 3 after the 2nd and 3rd injection (both $p<0.05$) (Table 1). A downtrend was observed in the mean GPS score from baseline to the 3rd injection (Figure 2). In the satisfaction survey, 37 (94.9%) patients were satisfied or very satisfied with the treatment result. The treatment was well-tolerated, without any adverse event reported during the study period.

Conclusion:

The SPCLHA injection effectively improved the facial skin quality in adult Chinese patients, as shown by the positive trends of skin quality reflected in the GAIS and GPS scores. The treatment was also safe and showed a high satisfaction rate among all participants.

Table 1. Global Aesthetic Improvement Scale (GAIS) and Global Photoaging Scale (GPS) evaluation by an independent evaluator at baseline and after 1st, 2nd and 3rd SPCLHA injections.

Characteristic	Baseline N = 39	After 1st injection N = 39	After 2nd injection N = 39	After 3rd injection N = 21
GAIS, n (%)				
0	-	0(0)	0(0)	0(0)
1	-	30 (76.9)	14 (35.9)	5 (23.8)
2	-	8 (20.5)	14 (35.9)	7 (33.3)
3	-	1 (2.6)	11 (28.2)	9 (42.9)
P-value	-	-	<0.001*	<0.001*
GPS score, n (%)				
1	1 (2.6)	1 (2.6)	1 (2.6)	3 (14.3)
2	13 (33.3)	13 (33.3)	24 (61.5)	12 (57.1)
3	23 (59.0)	24 (61.5)	13 (33.3)	5 (23.8)
4	2 (5.1)	1 (2.6)	1 (2.6)	1 (4.8)
P-value	-	0.773	0.003*	0.006*

Note: There is no baseline GAIS score since the tool evaluated aesthetic improvement with respect to the previous treatment. A GAIS score of 1 or more represent improved skin quality.

* Wilcoxon signed-rank test was performed and $p<0.05$ indicates statisitcally significant difference between each injection and baseline.

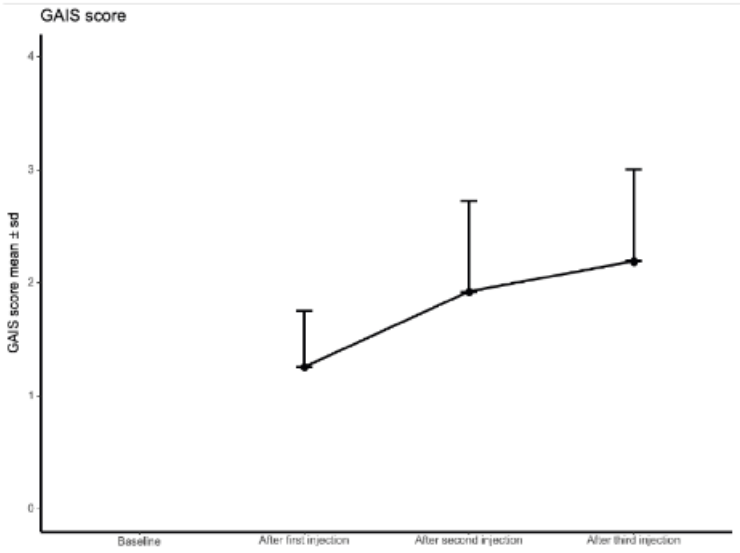

Figure 1. Trend of the mean Global Aesthetic Improvement Scale (GAIS) score after each injection

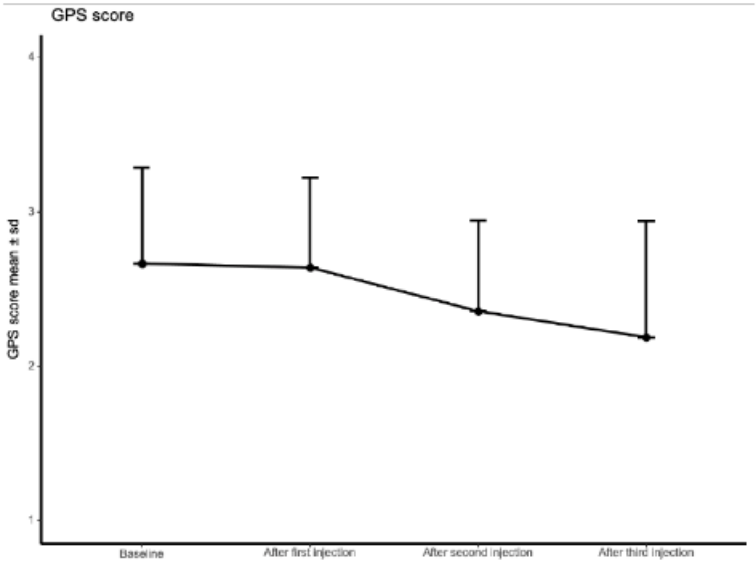

Figure 2. Trend of the mean 5-Point Global Photoaging Score (GPS) after each injection

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Abstract N°: 4048

Lipolytic Mesotherapy-Associated Skin Reactions: A Report of 17 Cases of Infectious and Noninfectious Complications

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Lipolytic Mesotherapy-Associated Skin Reactions: A Report of 17 Cases of Infectious and Noninfectious Complications

Introduction & Objectives:

Mesotherapy is a medical procedure in which trans epidermal injections are used to deliver pharmacological substances directly to dermis or deeper layers of the skin. It currently has both cosmetic and medical uses. Multiple infectious and non-infectious skin complications have been reported, which have been associated with extrinsic and intrinsic factors associated to the injected materials.

Objectives: To describe the epidemiological, clinical, and histopathological characteristics of patients with infectious and non-infectious skin complications related to lipolytic mesotherapy in a tertiary Dermatology Center.

Materials & Methods:

An observational, descriptive, cross-sectional, retrospective study was conducted from January 1992 to July 2022 at a tertiary dermatology center. We included patients over 18 years of age, with clinical and histopathological diagnosis of skin complications related to lipolytic mesotherapy. All patients presented skin changes at the injection sites and PCR studies were performed. Age, sex, educational level, chronic diseases, injector profession, establishment, lipolytic substance, incubation period, clinical characteristics, histopathologic findings, diagnosis, treatment, and complications were recorded. A descriptive analysis of the quantitative variables was carried out. The STATA v13 program (StataCorp LP, College Station, Tx) was used.

Results:

Seventeen patients had history of lipolytic mesotherapy and developed skin changes at the injection sites. Four individuals presented PCR, bacteria culture, or histopathology stains positive for bacterium. Three of them were positive for atypical mycobacteria and the latter with nocardia. Mesotherapy as lipolytic procedure, was performed in 94.6% of cases by non-medical personnel in nonstandard health offices such as homes or gymnasiums. The most injected lipolytic substance was a commercial combination of water, L-carnitine, and sodium benzoate in 41.2% (n=7), with a median of 2 injection-sessions and an incubation time of 30 days after injection. In 29.4% of patients, the injected material was unknown. Skin lesions indicated that lipolytic mesotherapy was performed in the abdomen and posterior thorax. The most reported clinical picture was painful subcutaneous nodules and abscesses. Suppurative granulomatous dermatitis was seen in 82.4% (n=14) and the antibiotic with the highest rate of clinical resolution in both groups was moxifloxacin. Clarithromycin and trimethoprim-sulfamethoxazole were also effective.

Conclusion:

This study tried to establish the epidemiological and clinical characteristics of the skin complications associated with lipolytic mesotherapy. These skin alterations resulted from the injection of unauthorized substances by non-healthcare professionals. We would like to highlight moxifloxacin as the most effective antibiotic treatment for ISC and NISC related to mesotherapy. In cases of resistance, we suggest the prescription of clarithromycin, moxifloxacin, and trimethoprim-sulfamethoxazole as combined treatment. We hope that our study helps to stablish new research lines that focus on unauthorized substances that could affect many patients who are unaware of their short-and long-term effects.

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Abstract N°: 4089

The BALB/c mouse as an animal model for photoaged skin

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Introduction & Objectives:

Cutaneous photodamage is an emerging condition with complex pathogenesis, which causes premature aging and desires for treatment and prevention. To develop agents for photo-protecting or ameliorating actinic aging, mouse model has been used extensively and played an important role for the study of photoaged skin. Numerous research have used SKH1 hairless mouse for photoaged model with various algorithm of ultraviolet irradiation, which can lead to some difficulties in widely application. Therefore, in this study, we attempted to establish a photoaged non-hairless BALB/c mouse model with optimized chronic irradiation protocol.

Materials & Methods:

6-week-old female BALB/c mice were repeated exposing to UVA + UVB light, 4 times a week for 12 weeks, in two dosages equivalent 1 MED (total 25.9 J/cm2 UVA, 2.76 J/cm2 UVB) and 2 MED (total 51.8 J/cm2 UVA, 5.53 J/cm2 UVB). The aging manifestation was assessed by skin wrinkles through photographs, skin thickness, sagging, hydration and elasticity every 2 weeks. Besides, skin biopsies were performed at 4th, 6th, 8th and 12th to evaluate epidermal, dermal thickness and collagen quantification by hematoxylin and eosin staining, Masson's trichrome staining. Furthermore, gene expression of collagen 1, collagen 3 and some type of MMPs was analyzed in the UV-irradiated mouse skin.

Results:

The results demonstrated that in the UV group, skin thickness, skin wrinkle and sagging were significantly increased; while there was a decrease in skin hydration and elasticity compared to the control group ($p<0.05$). Histological examination showed epidermal hyperplasia, dermal thickening and collagen degradation in the UV irradiation group. Moreover, UV light significantly increased the mRNA expression of MMP-1, MMP-2, MMP-3, MMP-13 ($p<0.05$) and decreased collagen 1 and collagen 3 expression.

Conclusion:

This study successfully established a cutaneous photoaged murine model by repeated UV-AB irradiation (at total dose 51.8 J/cm2 UVA, 5.53 J/cm2 UVB in 12 weeks). These results indicate that the non-hairless BALB/c mouse is a suitable model for research of photoaging.

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Abstract N°: 4114

The role of chemical peels in photoaging treatment

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Introduction & Objectives:

Extrinsic aging occurs as a result of daily exposure to free radicals from different sources such as UV rays, tobacco smoke and pollution. These free radicals cause damage to lipids, proteins and DNA, limiting the cell's ability to function properly, which results in a decrease in collagen and elastin, the main structural proteins of the skin. 80% of facial skin aging is attributed to sun exposure and is referred to as dermatoheliosis or photoaging. It causes collagen fragmentation, hyperpigmentation and the appearance of deep wrinkles. TCA peels stimulate collagen synthesis and reduce hyperpigmentation. Phenol peels can be effective in treating photoaging, although they may have a lower safety profile. The objective of this study is to evaluate safety and efficacy of photoaging treatment with a new peeling formula combination based on 10% phenol and 35% TCA and a complex with an aminoacid, a phenolic acid and an hydroxycinnamic acid.

Materials & Methods:

Human dermal fibroblasts were incubated for 24h with the combination of compounds for wound healing assay or qPCR assay of skin aging-associated genes. On the other hand, cells were induced to senescence using UVB irradiation and subsequently treated with the combination of compounds for 48h. Senescence-associated genes were quantified using qPCR assay. Following the in vitro results obtained with the combination of active ingredients, ex vivo studies were conducted to test their permeability and efficacy. Treatments were carried out following the peeling application protocol, on full thickness reconstructed skin. After treatment, cross sections were obtained and the markers Ki67 and Cytokeratin 14 (proliferation), Colagen IV (Dermo epidermal junction) and filaggrin (differentiation) were analysed through optical and fluorescence microscopy to study the efficacy of the combination. In addition, MTT safety studies were performed on the reconstructed skin models and DAPI staining was performed to visualise viable cells in the epidermis. Clinical cases with photoaging were also performed to evaluate the safety and efficacy of the formula.

Results:

The combination of compounds showed regenerative effects in the wound healing assay and induced the expression of genes associated to extracellular matrix (COL3A1, COL5A1, TIMP1, TIMP3), growth factors (FGFb, TGF-b1, VEGF), antioxidant defence (CAT, GPX3, GSTT1, HO-1, MnSOD, SOD1, TrxR1) and autophagy (ATG12, ATG5, Beclin1, LC3). The combination also showed senomorphic effects by decreasing the expression of senescence-associated secretory phenotype genes (IL-8, MMP-1, MMP-3) in senescent fibroblasts. At the ex vivo level, the protocol was found to be sufficient to stimulate proliferation and differentiation through the action of the combination of actives. In addition, the MTT results showed a good safety profile with no toxicity. These results also show the ability to penetrate the stratum corneum in a reconstructed skin model. Clinical results showed an improvement in skin, the treatment was safe and the downtime was tolerable by the patients. Possible complications and their management will be discussed. **Conclusion:**

We propose a new chemical peel formula for photoaging treatment which has shown interesting evidence in the different studied models.

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Abstract N°: 4198

Scrotal angiokeratoma successfully treated with ND YAG laser

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Introduction & Objectives:

Angiokeratomas are asymptomatic, benign cutaneous vascular tumours that can be difficult to differentiate clinically from other tumours. They present as papules with a scaly surface that sometimes bleed spontaneously. Treatment is often not necessary. However, the demand for radical treatment is for aesthetic and functional purposes. Several therapeutic modalities are available including laser therapy. We report the case of a patient with a usual location of angiokeratoma on the scrotum, who was successfully treated with 1064 nm long pulse ND YAG (Frequency Doubled Neodynium: YAG) laser therapy.

Materials & Methods:

This is a clinical case whose diagnosis was based on clinical and dermoscopic analysis using a Dermoscopy Dermlite 4 coupled with an IPHONE with histological confirmation.

Results:

A 39-year-old man, followed for a hepatic cirrhosis complicated by portal hypertension under anticoagulant treatment and a stage III varicocele, consulted for painless, non-pruritic and spontaneously bleeding lesions in the scrotum that had been progressively evolving for 4 years. The dermatological examination revealed multiple erythemato-violine papules and angiomatoses of 2-4 mm with a slightly scaly surface on the scrotum. On dermoscopy: red and dark lagoons. The rest of the skin examination showed a varicose cord under the skin on the left testicle. Skin biopsy confirmed the diagnosis. Given the patient's aesthetic and functional discomfort, treatment with a long-pulse ND YAG laser of 1064 nm, energy 200 joules were recommended with a satisfactory evolution after 2 sessions of 2 months interval. The laser treatment was performed under local anaesthesia, holding the skin containing the lesions between the fingers to avoid any effect of the laser energy on the testicles. Initial reactions to the treatment consisted of minimal swelling or localized pain. These reactions are transient. A topical fucidin ointment was applied to the treated skin areas for 10 days followed by a copper zinc healing cream until healing. No recurrence was observed over a follow-up period of 1 year.

Conclusion:

We suggest the efficacy of single and repeated ND YAG laser, targeting the vascular component, in the treatment of scrotal angiokeratomas with less mutilating scarring and less risk of recurrence which remains the choice over surgery.

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Abstract N°: 4248

Bilateral facial erysipelas with periocular involvement following microneedling with radiofrequency device

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Introduction & Objectives:

Cosmetic and aesthetic medicine procedures may be complicated with secondary skin infections. The use of unattested replaceable parts of devices and altered hygienic conditions may contribute to increased risk of infections in treated individuals. Microneedling is well-known for being associated with increased risk of widespread yet superficial skin infections (such as herpes simplex and S. aureus), nonetheless, cellulitis is not considered a common adverse event after this procedure.

Materials & Methods:

We report a case of a middle-aged male patient who presented to the Emergency Department due to progressive facial swelling and erythema. The patient was a non-smoker, had no comorbidities, and was not taking any medications on a regular basis. Four days prior to admission, the patient underwent microneedling with a radiofrequency device of unknown origin, performed by a cosmetician on glabella and eyelid area for aesthetic reasons. One day following the procedure, mild oedema and erythema of the left suborbicular area and elevated body temperature to 37.2 Celsius degrees appeared. Two days later, the patient was consulted by a dermatologist in the outpatient setting and prescribed oral and intramuscular glucocorticosteroids due to allergic reaction.

Results:

On the 4th day following the microneedling procedure, the patient presented to the emergency department and was subsequently admitted to hospital due to bilateral oedema and erythema of the face involving left periocular area with accompanying fever and honey-yellow blistering of left earlobe, malar and subnasal area. At admission, elevated inflammatory markers (WBC of 14.9x10^3 /µL with neutrophilic predominance and CRP of 14.2 mg/dL) were noted. Based on clinical picture of blistering and fever ad well as laboratory test results, diagnosis of facial erysipelas was made.

Conclusion:

Here we present a rare case of severe bilateral facial erysipelas, which was initially mistreated as an allergic reaction to cosmeceuticals and nickel-coated needles used during the radiofrequency microneedling. Due to difficulties in differential diagnosis, recognition of facial erysipelas may be delayed. Early implementation of antibiotics is important to avoid ocular involvement and potentially fatal complications in facial erysipelas.

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Abstract N°: 4291

Revolutionizing the Management of Physiological Striae in Teenage Girls: Efficacy of Platelet-Rich Plasma Therapy

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Introduction & Objectives:

Platelet-rich plasma (PRP) therapy has emerged as a highly utilized treatment option in dermatology practice. This research aimed to evaluate the efficacy of PRP in the management of physiological striae in teenage girls, utilizing advanced statistical methods. The study focused on 10 participants who received three PRP treatment sessions, one month apart. This abstract summarizes the materials and methods employed; the results obtained using advanced statistical analysis, and the overall conclusion drawn from the study.

Materials & Methods:

Ten participants seeking treatment for physiological striae at a dermatology clinic were enrolled in the study by random selection. Each participant received three PRP treatment sessions, with centrifugation performed at 2000rpm for 10 minutes to obtain PRP. The amount of PRP administered was 0.1ml for each 1cm length of the striae mark. Prior to PRP injection, topical anesthesia using lidocaine prilocaine was applied for 15 minutes. Standard size photographs were taken from various angles before and after the treatment sessions. To serve as controls, untreated striae were maintained in each patient. The evaluation of results involved a scoring system based on pre- and post-treatment photograph assessments. The scoring system consisted of Grade A (highly positive change), Grade B (positive change), Grade C (only minor change), and Grade D (no change). Advanced statistical analysis, including chi-square test and analysis of variance (ANOVA), was performed to determine the significance of the results.

Results:

The advanced statistical analysis of the results revealed significant improvements in the appearance of physiological striae following PRP treatment. Out of the 20 reviewers , Grade A improvements were observed in 3 cases, Grade B improvements in 9 cases, Grade C improvements in 5 cases, and Grade D (no change) in 3 cases. Advanced statistical analysis, including chi-square test and ANOVA, confirmed the significant efficacy of platelet-rich plasma (PRP) therapy for physiological striae in teenage girls. The chi-square test showed a significant association between PRP treatment and improved striae appearance ($p < 0.05$). ANOVA analysis indicated highly significant differences among the treatment response grades ($p < 0.001$). These findings provide robust evidence supporting the effectiveness of PRP therapy in revolutionizing the management of physiological striae.

Conclusion:

This study utilizing advanced statistical methods demonstrates the remarkable efficacy of PRP therapy in the treatment of physiological striae in teenage girls. The findings provide strong evidence that PRP treatment leads to significant improvements in striae appearance. The association between PRP treatment and treatment response grades was statistically significant, indicating the effectiveness of this approach. With its non-invasive nature and promising outcomes, PRP therapy offers a potential breakthrough in the field of dermatology. Further research and clinical trials, incorporating larger sample sizes and longer follow-up periods, are warranted to confirm these findings and optimize treatment protocols for the benefit of patients

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Abstract N°: 4306

Efficacy and safety of microneedling radiofrequency with an advanced cooling system in treatment of rosacea

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Introduction & Objectives:

Rosacea is a chronic inflammatory disorder characterized by telangiectasia, erythema, papules, and pustules on the center of the face. Microneedling radiofrequency (MRF) with an advanced cooling system (ACS) is an emerging modality that helps to control and maintain the temperature of the cooling plate to protect the epidermis and reduce pain and also enables safer and more powerful energy delivery. This study aimed to investigate the effect of MRF with ACS on the clinical improvement and safety of patients with rosacea.

Materials & Methods:

This study was a 12-week prospective clinical trial. Ten patients with erythematotelangiectatic rosacea (ETR) or papulopustular rosacea (PPR) were selected. The exclusion criteria were as follows: any treatment in the previous 2 months; a history of inserting a filler into the face or a metal device into the body; and pregnancy or lactation. All patients provided written informed consent before participating in the study.

A topical anesthetic cream was applied under occlusion for 20 minutes before treatment. The MRF device (Virtue RF, SHEnB, Korea) can deliver energy to the skin using an applicator tip comprising 36 insulated microneedles that interact with an ACS. The treatment was performed at energy levels 3–4 for 1000 ms, 0.5 Hz, and 10 pulses. The depth was set to 1.5–2 mm. The treatment was performed with a 30% overlap in two passes. Each patient received three sessions of treatment with a 4-week interval.

Patients were also asked to report any treatment side effects and pain scores using 10 visual analog scales (VASs) ranging from 0 (no pain) to 10 (extremely painful). The severity score was evaluated based on IGA scores at weeks 0, 4, 8 and 12. Improvement at weeks 12 was graded as follows: “poor” (0–25% improvement), “fair” (26–50% improvement), “good” (51–75% improvement), or “excellent” (76–100% improvement). Patients reported at weeks 12 their degree of satisfaction as very satisfied, satisfied, slightly satisfied, or dissatisfied.

Statistical analysis: The treatment effects were compared between the two groups at baseline and each follow-up visit, and the data were analyzed using the paired t-test. A p-value < 0.05 was considered statistically significant.

Results:

The mean age of the patients was 32.6+3.9 years. The baseline severity of rosacea was mild in three patients, moderate in five and severe in two.

The mean VAS scores for pain were 1.7+0.2, 1.5+0.17, and 1.2+0.13 in the first, second, and third sessions, respectively. All patients experienced transient erythema and edema immediately after treatment, which resolved within a few hours without special management. No noticeable adverse events, such as pigmentation or scarring, were observed.

The mean IGA scores were 2.3+0.37 at the baseline and 1.6+0.3, 0.9+0.28, and 0.6+0.22 at weeks 4, 8, and 12, respectively (p=0.000, p=0.000, p= 0.002). The mean IGA score at week 12 indicated an approximately 62.5 %

improvement.

1/10, 4/10, and 5/10 patients reported “fair improvement”, “good improvement” and “excellent improvement” after 3 sessions, respectively.

Overall, 4/10, and 6/10 patients reported being “satisfied” and “very satisfied” after 3 sessions, respectively, indicating that patients were highly satisfied with the MRF treatment.

Conclusion:

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Conclusively, MRF treatment with ACS resulted in good clinical improvement of rosacea with minimal side effects. Therefore, we suggest that MRF may be an alternative therapeutic option for rosacea. C

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Abstract N°: 4323

International dermocosmetic skincare consensus using the RAND/UCLA appropriateness method

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Introduction & Objectives: Consumers often seek recommendations from dermatologists on the best ingredients in dermocosmetics for their specific skin aging concerns. The objective of this international expert consensus was to provide a scientifically validated tool for recommending essential products for protection and repair and then work up to more advanced products for specific concerns.

Materials & Methods: A panel of 7 international experts reviewed 8 hypothetical case scenarios as representative examples of patients seen in daily dermatological consultations, covering different ages, skin issues (e.g., sensitivity, acne, melasma) and exposure to exposome factors, for both sexes and all Fitzpatrick skin types (FST). The RAND/UCLA appropriateness method was used to obtain consensus. The experts completed a questionnaire to evaluate the appropriateness of 17 key ingredients in dermocosmetics on a scale from 1 (totally inappropriate: never used as risks greatly outweigh the expected benefits), through 5 (uncertain), up to 9 (totally appropriate). After statistical analysis, two meetings and email discussions refined the recommendations.

Results: Specific recommendations were made to summarize appropriate ingredients for each scenario. Dermocosmetic ingredients recommended for all 8 scenarios included wide spectrum sunscreen with high sun protection factor for UVB and UVA, niacinamide, and other topical antioxidants. Further discussions were required to reach a consensus for some of the other key ingredients; for example, tinted sunscreen/iron oxide were recommended for all, especially for women, although compliance may be sub-optimal for darker phototypes (IV-VI) if not cosmetically acceptable to the patient. For darker phototypes, the experts recommended combining a facial foundation with tinted, or non-tinted, broad-spectrum (UVB, UVA, visible light) sunscreen as a solution to obtain visible light protection that closely color matches the patient's skin tone. Retinols were not recommended as a first-line treatment for cases of sensitive skin, especially FST V and VI, due to the risk of irritation. After ablative laser treatment, alpha hydroxy acids should be avoided or used with caution (avoiding high concentrations and low pH) in FST IV to VI due to the elevated risk of post-inflammatory hyperpigmentation.

Conclusion: We describe a simple, practical tool for use in daily dermatology consultations that is adapted to specific patient needs. This work provides recommendations to cover diverse and inclusive populations of patients, addressing all skin types and international needs.

C1 - Internal use

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Abstract N°: 4418

A case of cutaneous sarcoidosis after injection of hyaluronic acid

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Introduction & Objectives:

Sarcoidosis, or Besnier-Boeck-Schaumann disease, is a granulomatous systemic disorder of unknown etiology with highly polymorphic cutaneous manifestations. Among the different clinical forms of cutaneous sarcoidosis are post-traumatic forms (scar sarcoidosis, sarcoidosic granulomas). The introduction of foreign particles into the integument may be accompanied by reactions such as sarcoidosic granulomas. We report a case of cutaneous sarcoidosis in a 37-year-old woman after injections of hyaluronic acid (Skinbooster).

Materials & Methods:

A 37-year-old woman, without any particular pathological history, presented 3 weeks after hyaluronic acid injection (Skinbooster) with red nodules at the location of some injection sites progressively increasing in size, without any associated functional sign. The clinical examination noted the presence of several firm purplish red nodules, painless and non-mobile to palpation, ± 1 cm in diameter, located at the injection sites: the two cheeks and the periorbital area. Dermoscopy revealed translucent yellow-orange globules and linear vessels, typical of cutaneous sarcoidosis.The search for systemic sarcoidosis was negative. A biopsy was performed. Anatomopathological examination revealed a sarcoidosis granuloma characterized by small rounded nodules of epithelioid cells, surrounded by a narrow lymphocytic corona, and a few giant cells of Langhans type, without fibrinoid necrosis or caseation. We treated the patient with local and general corticosteroid therapy associated with immunosuppressant (MTX).The evolution was marked by the regression of papules under treatment with persistence of erythematous macules

Results:

The originality of this observation consists in the appearance of sarcoidosis granulomas at the sites of hyaluronic acid injections. There was no evidence of systemic sarcoidosis. This leads us to believe that it is a local sarcoidosis reaction by antigenic stimulation, and not a sarcoidosis of the type of scar reactivation which, as a general rule, manifests itself on real scars, corresponding to more or less ancient traumas. The appearance of sarcoidosis granulomas at the sites of introduction of various foreign bodies has been frequently reported in the literature. In the majority of cases, these reactions are localized but, in some cases, they may reveal systemic sarcoidosis. Even when the investigations are negative, as in this case, it is important to ensure long-term follow-up of the patients, as the later occurrence of systemic sarcoidosis cannot be excluded.

Conclusion:

Post-traumatic forms of cutaneous sarcoidosis are quite rare. In this observation, the injection of hyaluronic acid was the triggering element of such reactions

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Abstract N°: 4679

The Comparative Dermal Stimulation Potential of Constant-Volume and Constant-Amount Diluted Calcium Hydroxylapatite Injections versus the Concentrated Form

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Introduction & Objectives:

Besides the potential of calcium hydroxylapatite (CaHA) as a relatively long-lasting filler, diluted and hyperdiluted CaHa injections' biostimulation properties have become increasingly popular. However, the existing data are insufficient to certify a particular dose-response pattern for this potential. This study aimed to to assess and compare the dermal stimulation potentials of different concentrations of hyperdiluted CaHA injections versus the original CaHA product and negative control.

Materials & Methods:

Two independent experiments (experiment-1: constant injection volume vs. experiment-2: constant CaHA amount) included four study groups each, and these experimental groups were placed consecutively on the abdominal skin of a juvenile Yorkshire pig. Histopathological stainings for inflammation score, fibroblast count, collagen density, and elastic fiber amount were performed on punch biopsy materials collected 4 months after the injection day.

Results:

The fibroblast count significantly decreased upon dilution from 1:3 to 1:19 in experiment 1 (**p=0.000**), but still higher than the control group. In experiment 1, the collagen density of the concentrated form was more elevated than the 1:19 dilution and the negative control groups (p=0.034 and 0.000, respectively) but similar to the 1:3 dilution (p=0.123). No significant difference was observed between the groups regarding collagen density with a standard amount of CaHA (0.2 ml, 30%) (p>0.05).

Conclusion:

Despite the efficacy being more pronounced till 1:3 dilution, hyperdiluted CaHA at any dilution ratio up to 1:19 can provide a higher fibroblast count than the negative control group.

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Abstract N°: 4686

A Multi-Action Facial Serum Containing Macrocystis pyrifera Ferment Delivers Broad Benefits for Aging Skin Appearance

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Introduction & Objectives:

Over time, facial skin is characterized by the presence of fine lines, wrinkles, and the loss of firmness and elasticity, among other alterations in the appearance of the skin following chronic sun exposure and/or the natural process of aging. The characteristics of aging skin arise with the degradation of extracellular matrix proteins, a decrease in hydration, a weakened barrier, and a reduction in epidermal cell renewal.

Materials & Methods:

Macrocystis pyrifera (MP) ferment is an efficacious ingredient derived from harvested giant sea kelp, rich in polysaccharides, minerals, and organic acids.

Results:

MP ferment has been shown to enhance dermal matrix proteins that diminish with age. In preclinical studies, topical application of water in silicone face serum containing MP ferment demonstrated histological enhancement of epidermal and dermal hyaluronic acid along with the enhancement of fibrillin after 9 days of application.

In clinical studies, the serum was evaluated in a 12-week clinical trial on 38 women of varied Fitzpatrick skin types and ethnicities, ranging in age from 44-65 years. Facial skin firmness, laxity, and other parameters of aging facial skin were evaluated by expert visual grading. With regular use over 12 weeks, 97% of subjects showed a visual improvement in sagging of cheek, nasolabial, and jawline areas, which imparted a lifted appearance. Subjects also showed enhanced firmness and elasticity via tactile measurements and a 30% improvement in lines in the crow's feet area based on visual grading.

This facial serum was found to boost skin hydration and improve skin appearance within hours. In additional clinical studies, the serum was also shown to accelerate skin cell renewal at the surface and reduce erythema in an induced-irritation model. This serum also exhibited the potential to combat UV-induced oxidative stress, which is known to drive deleterious changes in the skin.

Conclusion:

In summary, this facial serum formulated with *Macrocystis pyrifera* ferment demonstrated several beneficial effects on skin and improved its appearance, including a visual lifting benefit and tactile firming benefit.

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Abstract N°: 4751

Fractional Carbon Dioxide Laser in Treatment of Mpox Scars. Case report.

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Introduction & Objectives:

Mpox (Monkeypox) is a zoonotic orthopoxvirus that is in the same genus as variola and vaccinia viruses. The virus was first described in 1950s in Central and West Africa with a new outbreak in May 2022 reaching non-endemic countries. Transmission is predominantly human-to-human, the leading population is men who have sex with men. Incubation period usually lasts from 4-21 days. Skin eruption involves multiple stages, including macules, vesicles and pseudopustules that often develop umbilication. Lesions are often described as painful, firm, deep-seated and 2-10 mm in size leaving significant varioliform scars. The present case intends to emphasize that dermatologists must provide early guidance and optimize wound care including treatments for Mpox sequelae.

Materials & Methods:

We present a case of a 46-year-old Hispanic male, originated from Etzatlán, Jalisco with a past medical history of rheumatoid arthritis treated with methotrexate, sulfasalazine, and celecoxib. He presented to the emergency room with a 1-week history of fatigue, fever, chills, myalgias and multiple painful macules on the face, which later disseminated to the whole body.

On examination, he had multiple well-circumscribed papules, pseudopustules and vesicles varying from 3 mm to 5 mm with exudative background in the above areas that were predominant on the face and trunk, affecting oral mucosa, palms, and soles. Some of the lesions presented with a depressed necrotic center and local erythema. Oral mucosa showed multiple, erythematous, erosive lesions over buccal mucosa, tongue and vermillion border. Real-time polymerase chain reaction (PCR) of a skin lesion swab confirmed the diagnosis of Mpox. Three months after the initial event the patient visited our clinic due to prominent residual atrophic scars on his face. Therefore, we decided to perform a session of fractional CO2 laser and pretreat the patient with topical hydroquinone 4%. The parameters were a fluence of 15 J/cm2 deep and 50 J/cm2 superficial in a single pass and only 1 session was given.

Results:

Regarding management World Health Organization (WHO) recommendations include droplet and contact isolation until all lesion crusts have naturally fallen off. Nowadays no specific clinically proven treatments for Mpox sequelae are currently available. Permanent skin scarring is a frequent complication of the disease which is the result of the marked inflammatory response.

Conclusion:

Fractional CO2 laser has become more popular due to the decreased number of side effects in the treatment of atrophic scars, burn scars, surgical wounds, and photo-damaged skin. Collagen denaturation contributes to the contraction of tissues and also induces a tissular reaction that generates neocollagenesis during the six months following the procedure. In our experience the benefits of this novel technology for the treatment of Mpox scars

was successful. After 1 month the patient showed excellent improvement on his scars, postinflammatory hyperpigmentation and quality of life with minimal side effects.

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Abstract N°: 4768

Clinical Evaluation of a New Wrinkle Correcting Cream Containing Two Flavonoid-Rich Fruit Extracts

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Introduction & Objectives: Both the dermal and epidermal function of chronologically aged skin can be impacted by the formation and accumulation of endogenous Advanced Glycation End Products (AGEs). AGEs cause extracellular matrix (ECM) proteins to become brittle, weaken their reparative abilities, and degrade their overall integrity. The degradation of the ECM proteins manifests as signs of skin aging such as wrinkling and laxity. AGEs can also affect epidermal structural proteins like filaggrin and damage skin barrier function. This research was designed to evaluate the anti-aging benefits of a new cream containing blueberry and pomegranate fruit extracts, known glycation inhibitors, in human clinical trials.

Materials & Methods: Three separate clinical trials were conducted. First, a 12-week clinical study was conducted on 77 females ages 38-70, with Fitzpatrick skin types I-VI, and mild to moderate facial wrinkles and fine lines. The cream was used twice daily on the face, neck and chest in conjunction with a sunscreen. Clinical efficacy, tolerance, and skin punch biopsy analysis for filaggrin protein (n=9) were performed at baseline and week 12. In addition, a double-blind, randomized clinical study was conducted on the forearm of 40 females. The test zones were treated with or without the cream for 4 hours followed by dermal torque meter (DTM) measurement of skin mechanical properties. Finally, a double-blind, randomized clinical study was conducted on 29 subjects with or without application of the cream on the forearm. Corneometer readings were conducted at baseline, immediately after application, and 24 hours after application.

Results: After 12 weeks, compared to baseline, the cream significantly reduced ($p<0.05$) the appearance of global fine lines (14%), forehead wrinkles (11%), nasolabial folds (11%), marionette wrinkles (7%), glabellar wrinkles (7%), and crow's feet wrinkles (7%). The cream increased ($p<0.05$) filaggrin protein expression by 92% as quantified by immunostaining on biopsies. After 4 hours, compared to untreated control, the cream significantly increased ($p<0.05$) the skin extensibility, tonicity, and elasticity/firmness. In addition, the cream also showed ($p<0.05$) immediate and 24-hour lasting skin hydration benefit.

Conclusion: In our clinical trials, the cream statistically improved skin biomechanical properties and demonstrated anti-aging and moisturization benefits

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Abstract N°: 4843

low fluence multipulsing at 532 nm in the treatment of port wine birthmarks: investigation of high frequency and low frequency pulsing in the chick chorioallantoic membrane model

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Introduction & Objectives:

The gold standard for treating Port-wine stains (PWS) is pulsed lasers at wavelengths with significant hemoglobin absorption. Conventional methods utilize a single pulse at a high fluence (SPHF) to induce thermal damage in the vessels. However, this approach often leads to pain and purpura. Successful treatments require repeated sessions with general anesthesia, commencing in early childhood, which can negatively affect neurocognitive development. One possible way to mitigate pain and achieve effective treatment is to use multiple pulses at a low fluence (MPLF), as suggested by Arrhenius models of thermal injury. As the pain may be related to both cumulative rise and sudden spikes in epidermal temperatures, developing a technique with a minimal increase of baseline temperatures while decreasing fluence is essential.

This work aims to find the proper frequency (high enough to be efficient, low enough to minimize the increase in baseline temperatures and pain) to achieve desired clinical endpoints with the MPLF regime.

Materials & Methods:

The chorioallantoic membrane was used as an in vivo animal model to evaluate changes in the microvascular network. A customized 532 nm fiber laser was used for irradiation. A digital microscope and thermal camera were used to follow changes in vascular structure and tissue temperatures. Stable coagulum (SC) and vessel collapse (VC) were established as clinical endpoints. SPHF threshold was found at the endpoints observed. Then, the MPLF sub-threshold was discovered by decreasing the threshold to 20- 75%. We experienced different irradiations with a square spot of 3 x 3 mm and pulse width (PW) of 9-10 ms with MPLF. These shots were delivered at frequencies (f) of 0.1 – 0.2 Hz for the non-thermal regime and 1-3 Hz for the thermal regime. The difference in baseline temperatures (ΔT) was calculated.

Results:

Thermal regime:

SC was formed at fluence (F) of 1.7 J/cm2 (37% of SPHF threshold), PW of 10 ms, and f of 3 Hz after ten pulses. ΔT was 36.7 °C. VC was achieved at F of 2.2 J/cm2 (24% of SPHF threshold), PW of 10 ms, and f of 3 Hz after 12 pulses. ΔT was 45.5 °C.

Non-thermal regime:

SC was formed at F of 2.2 J/cm2 (52% of SPHF threshold), PW of 10 ms, and f of 0.1 Hz, starting from the 16th to the 32nd pulse. ΔT was 18.3 °C. VC was observed at F of 5.9 J/cm2 (54% of SPHF threshold), PW of 9 ms, and f of 0.1 Hz, starting from the 4th to the 16th pulse.

Conclusion:

MPLF approach at 532 nm with fluences in the 24 – 70% range of the SPHF threshold can achieve similar clinical endpoints with traditional therapies. Regarding MPLF, achieving comparable results to the thermal regime (with thermal build-up) with the non-thermal regime (with a notably lower ΔT) is possible. Our results may be promising for less painful PWS treatment. Human studies will be required to validate the approach.

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Abstract N°: 4949

Laser therapy combinations in granuloma faciale: description of 10 cases

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Introduction & Objectives:

Granuloma faciale is a rare condition with no standardized treatment.

Materials & Methods:

We present a series of 10 patients treated with different combinations of lasers.

Results:

All patients had been diagnosed with granuloma faciale through biopsy. The biopsy revealed focal vasculitis with dense dermal infiltrates of neutrophils, lymphocytes, and plasma cells mixed with eosinophils, sparing the upper papillary dermis (Grenz zone). Nine out of ten patients were males between the third and sixth decade of life. All patients presented with typical clinical findings consisting of erythematous-brownish papuloplaques on the face, and one patient also had extensive extrafacial involvement (trunk and upper extremities).

The patients had previously received topical treatment (corticosteroids and/or immunomodulators) without a response.

Regarding laser treatment, all ten patients received treatment with pulsed dye laser (PDL) (10 mm, 7.5-8.5 J/cm2, 0.5-2 ms), obtaining a purpuric endpoint.

Half of the patients additionally received CO2 laser treatment in different modes (continuous wave was used to treat a case of rhinophyma-like granuloma faciale; ultrapulsed mode was used for vaporization of larger lesions; fractional CO2 was used for flatter lesions followed by topical application of triamcinolone [laser-assisted drug delivery]). The number of sessions varied between 2 and 11, with one patient outside this range who required multiple sessions and continues to have granuloma faciale recurrences.

Conclusion:

The etiopathogenesis of granuloma faciale remains unknown. The facial localization often leads patients to seek treatment. Granuloma faciale is frequently resistant to treatments, and recurrences have been described with topical and systemic medications, cryosurgery, electrocoagulation, laser, and surgery. Isolated cases of PDL, argon laser, and CO2 laser treatments for facial granuloma have been reported in the literature, with varying rates of success. Laser treatment represents an alternative that should be offered to patients with granuloma faciale due to its potential efficacy, superior aesthetic results compared to surgery, and minimal complications.

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Abstract N°: 4951

Scar checkpoints: An updated review of different approaches

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Introduction

Beyond the loss of skin functionality, scars may be associated with aesthetic, psychological, and social distress. Despite the advances in aesthetic dermatology, scar management is still a challenge due to several factors. The exact pathophysiology of scars still needs to be completely understood. The grading systems are heavily subjective, with limited sensitivity in detecting changes in the appearance of a scar. These limitations hindered the development of clear algorism to deal with scars effectively.

Every scar runs through 3 phases: Inflammatory, proliferative, and remodeling phase to reach maturation. A gold-standard system to classify or grade scars is currently indeed. However, scars may be divided into mature and immature scars as they achieve 80% of their tensile strength within two months. They also can be classified according to morphology (flat – atrophic – hypertrophic - keloid); and color (hyper-, hypo-pigmented, erythematous).

Materials and methods

By merging these classifications, the management starts. Every scar has a meaningful story which guides us through our journey of classification and treatment algorism. We could start preoperatively by placing incisions parallel to relaxed skin tension lines. It is important to close the wound in aseptic condition with approximation and absence of tension. Also, single non-ablative fractional laser treatment may be performed preoperatively or in the early phase of wound healing provides detectable improvement. Botox (2.5units of Botox/cm2)may be injected preoperatively in facial scars only.

In post-operative care, a wound can be cleaned with saline because alcohol or iodide is cytotoxic to cells that promote the healing process. Non-absorbable sutures should be removed as early as possible when the wound can hold itself together. Tension-bearing skin tapes are used during the period of remodeling to help scars mature properly.

Results

For immature scars, vascular lasers such as Pulsed Dye Laser 595nm, KTP 532nm, and Diode laser 810nm are the best. Also, injection of Botox in facial scars helps them to mature rapidly, maintaining the same width with the maximum tensile strength.

Scars become mature as norm trophic, hypertrophic, or atrophic. Hypertrophic scars are treated using lasers such as PDL, ablative fractional laser (AFL), non-ablative fractional laser (NAFL); or intralesional injection, or a combination of intralesional injection and laser; or Silicone; or excision.

While atrophic scars are treated with resurfacing by AFL, NAFL, radiofrequency, dermabrasion, peeling; or filling by filler, platelet-rich plasma, fat injection; or elevation by subcision, punch elevation, or punch excision.

Another factor to consider is the scar’s color, whether hyper or hypopigmented. AFL, peeling, or bleaching could treat hyperpigmented scars. Hypo-pigmented scars could be managed by NAFL; AFL; Excimer laser; or ultraviolet

radiation. Hair transplantation is a nice treatment option for scars in hairy areas. Nano fat is effective in improving scar characteristics.

Discussion

This lecture describes current recommendations on scar management, supported by before and after photos for real scar cases treated by different modalities (laser, PRP, intralesional injection, subcision, Botox, punch elevation, punch excision, scar revision, hair transplantation and fat injection). Procedures were chosen according to the evidence in updated review of literature to obtain the best results.

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Abstract N°: 4953

Niacinamide: a versatile anti-aging molecule against environmental stressors – new learnings from the mitochondrial physiology

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Niacinamide: a versatile anti-aging molecule against environmental stressors – new learnings from the mitochondrial physiology

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Introduction & Objectives :

Niacinamide, also called nicotinamide, is a form of vitamin B3 used for decades in cosmetic and pharmaceutical products for the treatment of rosacea, acne, sensitive skin, signs of skin photoaging, and pigmentary disorders. It contributes to the improvement of skin barrier integrity and inflammation. Recently, niacinamide has been shown to alleviate the induction of inflammatory and senescence-related phenotypes induced by environmental stressors.

Mitochondrion is a cell organelle which classic function is oxidative phosphorylation, producing ATP as the primary energy source of most biochemical and physiological processes. This organelle plays a critical role in the response to environmental stressors, being at the crossroads of the cellular response between pollution and aging. As recent publications evidenced a role of niacinamide in the transcriptomic regulation of subunits of the mitochondrial respiratory chains, we wanted to explore further the action of nicotinamide on the mitochondrial physiology and dynamics.

Materials & Methods:

Human primary dermal fibroblasts validated for pollution susceptibility and mitochondrial poisoning were cultivated in presence of niacinamide and submitted to standardized urban pollutant particles. Cells were then analysed for i) NADPH-oxidase activity, ii) fusion-fission balance of the mitochondrial network *via* a high content analysis (HCA), iii) occurrence of mitochondria-associated membranes with endoplasmic reticulum (MAMs) by proximity ligation assay and iv) autophagy and mitophagy by co-localisation imaging.

Results:

Pollutant increased the NADPH-oxidase activity and endoplasmic reticulum stress as measured by increased MAMs and demonstrating mitochondria calcium overload. Pollutant induced an excessive fission resulting from a deficient mitophagy, which dramatically mediated mitochondrial dysfunction, including extensive mitochondrial permeability transition pore (mPTP) opening, reduction in mitochondrial membrane potential, oxidative stress, calcium overload and mitochondrial respiratory collapse.

Niacinamide, dose-dependently, reduced the pollution-induced NADPH-oxidase activity. At the lowest tested dose, the normalisation in NADPH-oxidase activity, although normalizing it, was insufficient to reduce the

occurrence of MAMs, generating an increase in mitochondrial calcium influx. At the highest tested dose, niacinamide abolished both NADPH-oxidase activity and MAMs formation below the level seen in non-exposed and non-treated cells. Both doses reduced pollution-induced fission in the mitochondrial network and increased efficiency of autophagy/mitophagy, enhancing the recycling of damaged mitochondria.

Conclusion:

Niacinamide protects the mitochondrial network against pollution-induced impairments. This confirms the efficacy of niacinamide to alleviate the signs of intrinsic and pollution-aggravated aging and pigmentation, especially for the care of sensitive skin.

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Abstract N°: 5012

An innovative tailored approach to manage healthy ageing in sensitive skin.

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Introduction & Objectives:

We recently reported underlying changes in sensitive skin known to trigger skin aging: inflammation, neuroinflammation, reduced vascular network, altered skin barrier, and fragmented collagen fibers. Altogether, these events suggest sensitive skin is susceptible to an accelerated aging process. Based on these advanced discoveries, we developed a face serum (FC) containing an innovative blend of 5 ingredients (HRGPs glycopeptides, Leontopodium Alpinum Flower, Oryza Sativa Lees Extract, Niacinamide, Panthenol) with multi-targeted action on skin aging, whilst being gentle and decreasing signs of sensitivity. In vitro and clinical investigations were conducted to demonstrate the tolerability and efficacy of this FC in both Caucasian and Asian subjects.

Materials & Methods:

In vitro investigations were performed to evaluate and compare the tolerability of the FC with a product containing 0.3% retinol.

The safety and tolerability of the FC was evaluated under dermatological and ophthalmological control in 270 subjects using patch test, HRIPT, photosensitization, as well as a non-comedogenicity study and in-use tests. Efficacy was evaluated in a total of 90 women with sensitive skin and wrinkles and/or fine lines from Singapore (n=46; mean age 47.4 years) and France (n=44; mean age 44.7 years) who used the FC twice daily for 12 weeks (Singapore) or 8 weeks (France). Three levels of evidence were used: 1) Instrumental measurements (quantification of squalene monohydroperoxide with LC/MS; wrinkles and fine lines analysis using Quantirides® and Quantilines® softwares); 2) Clinical gradings (SensiScale, the nine main signs of skin aging were scored on a 10-point scale by an expert); 3) Self-assessment.

Results:

In vitro, the FC decreased IL-8 production (-81%) in human fibroblasts challenged with UVA, while a serum containing retinol (0.3%) increased it by 582%. The FC showed high tolerability across all clinical studies.

The FC increased squalene content by 48%, vs. non treated areas ($p<0.05$), with a protection index of 36.1% ($p<0.05$). Total wrinkles surface decreased after 4W (-23%, $p<0.05$), so did total length (-16%, $p<0.05$) and depth (-15%, $p<0.05$) of the wrinkles. The FC hydrates as early as 1h (+68%, $p<0.05$), up to 24h (+12%, $p<0.05$) after a single application. Significant improvement in the 9 main signs of skin aging was observed in both populations over 4–8W. Significant improvement in skin sensitivity was observed after 4W in Caucasian (-66% Sensi Scale score, $p<0.05$) and Asian women (-83% Sensi Scale score, $p<0.05$), confirmed by subjects who perceived their skin to be more comfortable, less reactive, and healthier looking. Women reported a high level of appreciation (>80%, after 8W) in terms of skin aging signs and skin texture improvement as well as suitability of the cream for sensitive skin. Healthy aging index score increased significantly in both Caucasian (3.00 to 7.75, +158%, $p<0.05$) and Asian (3.20 to 8.96, +180%, $p<0.05$) women over 4W.

Conclusion:

Sensitive skin syndrome is a widely reported complaint and there is a need for adequate cosmetics for its management. Through these in vitro and clinical studies, we demonstrated that a tailored dermo-cosmetic FC was able to improve skin aging signs, while decreasing skin sensitivity and being well tolerated.

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Abstract N°: 5027

Temporal atrophic scar treatment with combination of subcision and collagen stimulator

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Temporal atrophic scar treatment with combination of subcision and collagen stimmulator

Introduction & Objectives:

The increasingly demanded acne scars treatment poses a serious challenge for the physician. The well-established methods such as chemical peels, microneedling and laser therapy often prove insufficient in the treatment of rolling atrophic scars. They are best treated by subcision. The temporal and infraorbital areas of the face are dangerous to work with sharp instruments due to the presence of large, superficial blood vessels and nerves. We aim to show that combining subcision with a blunt instrument and simultaneous injection of a collagen stimulator is a safe and effective method to improve rolling cicatrix in neuralgic areas and has better tolerance and fewer side effects compared to the combination of subcision with a sharp instrument and deliberate hematoma induction.

Materials & Methods:

Two patients with similar atrophic rolling and boxcar facial cicatrices were treated with a combination of subcision with a 25G, 38mm cannula and infiltration of the areas of atrophic scars with a collagen stimulator containing collagen-building amino acids and high-molecular-weight, non-crosslinked hyaluronic acid. Each patient underwent 2 procedures after local anaesthesia with lidocaine cream at 14-day intervals. The effect was evaluated 2 weeks after the second procedure. Except for brief redness and mild pain, no other side effects were observed.

Results:

Both patients showed a significant improvement in the depth of atrophic scars located temporally, zygomatically and buccally, as well as an improvement in skin elasticity in the treated areas. No serious side effects were observed.

Conclusion:

Atrophic rolling acne scars are due to the formation of transversely located connective tissue fibers in the form of strictures that pull the skin surface to the dermis and disrupt its elasticity. Rupture of these fibers with various cutting instruments such as conventional needles, Nokor cannulas, wire, and others improves the appearance of the scars but is often painful and carry a risk of serious side effects such as blood vessel damage, nerve damage, and discoloration. Use of a blunt-tipped cannula dramatically reduces these risks and allows work in areas with multiple superficial vessels and nerves, such as the temporal, providing reasonably good efficiency.

Despite the subcision with a sharp or blunt instrument, atrophic cicatricial redepression due to readhesion of the superficial and deep dermal layers is frequently observed. According to the theory of Orentreich, during subcision, a hematoma is deliberately induced to prevent readhesion between the dermal layers and recurrence of the cicatrix. This is traumatic and painful for the patient, and is accompanied by a prolonged recovery period and increased risk of postinflammatory hyperpigmentation. In the patients presented, we replaced hematoma induction with dermal injection of a collagen stimulator, which stimulates new tissue formation in the cicatrix area and prevents readhesion of the transverse connective tissue fibers without being traumatic and without increased risk of discoloration. Combining subcision with blunt instrumentation and collagen stimulator injection is an

effective treatment method for rolling scars in difficult areas and has better patient tolerability and a better risk profile compared with the use of sharp instruments and traumatic hematoma induction.

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Abstract N°: 5046

Platelet Rich Fibrin as Filler Therapy for Atrophic Scar : A case report

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Introduction & Objectives:

Platelet Rich Fibrin (PRF) is improved version of Platelet Rich Plasma (PRP). PRF is a fibrin matrix that contains blood materials to help wounds heal. There are leukocytes, cytokines, structural glycoproteins, growth factors. Several growth factors include platelet-derived growth factor (PDGF), transforming growth factor beta (TGF-β), epidermal growth factor (EGF), vascular endothelial growth factor (VEGF), insulin-like growth factor I (IGF-I), platelet-derived epidermal growth factor (PDEGF), platelet-derived angiogenesis factor (PDAF), and platelet factor 4 (PF-4). Meanwhile, wound healing process is strictly regulated by various cytokines and growth factors that are secreted to the wound area. This case is aimed to evaluate the effectiveness application of PRF on chronic atrophic scar that had been neglected for years.

Materials & Methods:

A 40 years old woman comes with atrophic scar on her nose after an accident 2 years ago. She has rounded atrophic scar 1.5 x 1 x 0.4 cm. She underwent a therapy with PRF injection into her scar. 10 cc venous blood patient drawn into vacutainer tubes without anticoagulant. Then, it is placed in a centrifugal machine at 3000 RPM for 10 minutes. After centrifugation, a red blood cells layer at the bottom of the tube, a platelet-deficient acellular plasma layer at the top and PRF coagulation in the middle are formed. From the centrifugation, we get 3 cc semi-liquid PRF serum. PRF is injected into the scar with 23G needle intradermally. Immediately after the injection, the atrophic scar was raised. The treatment procedure is done every 4 weeks.

Results:

After 4 sessions of PRF injection, there was significant improvement on her scar. The patient was satisfied.

Conclusion:

PRF can be very effective for wound healing in dermatology. The applications are still in progress but it brings hope for the next future in dermatology field. It is very simple, safe, versatile, inexpensive, and quick procedural to be done in clinical practice.

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Abstract N°: 5436

Use of ablative Carbon Dioxide Laser for surgical removal of Xanthelasma Palpebrarum

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Introduction & Objectives:

Xanthelasma palpebrum (XP) is the commonest type of xanthoma, usually seen as soft, yellowish papules and plaques over the periorbital area. It is asymptomatic but cosmetically bothersome. XP can be treated by simple surgical excision, radiofrequency, laser therapy, chemical cauterization, and cryotherapy. Each modality has its advantages and disadvantages. Recurrence is one of the most common problems and can be attributed to incomplete removal.

The present study was conducted to evaluate the use of an ablative carbon dioxide laser instead of a surgical blade for the removal of XP. To study the duration of healing time, occurrence of side effects by using this method.

Materials & Methods:

Patients presenting with XP were included in the study. The demographic profile of these patients was studied. Laboratory investigations like lipid profile blood sugar, thyroid profile, and complete blood count were studied. Removal of xanthelasma was done by the following procedure: Lignocaine sensitivity testing was done. Local infiltration was done with 2% lignocaine with adrenaline solution in the lesions. Ablation of lesions was done with a carbon dioxide laser till the clearance of yellow deposits from the dermis. Then the wound is closed by a non-absorbable suture. Suture removal was done on 5th postoperative day. Patients were given oral antibiotics and analgesics for 5 days.

Results:

A total of 11 patients were included. Age ranged from 29 to 71 years with a mean age of 47 years. Female to Male ratio was 10:1. Most of the patients had isolated involvement of the upper eyelid. Grade I and Grade III of xanthelasma were seen in 5 patients each. Associated comorbidities were diabetes (4 patients), hypertension (1 patient), hypothyroidism (2 patients), and hyperlipidemia (5 patients). All the patients approached the treatment for cosmetic indications. 3 of the 11 patients received earlier treatment in the form of multiple applications of trichloroacetic acid peels, surgical excision, and radiofrequency ablation followed by recurrence.

By the present surgical method, almost all patients reported mild to moderate pain during surgery (visual analog scale less than 5). Bleeding during the procedure and bruising around the eyes were minimal and were seen in 2 patients. Mild post-operative periorbital edema was seen in only 2 patients. Post-inflammatory hypopigmentation was seen in one patient.

Conclusion:

Instead of using a surgical blade, removal of xanthelasma by ablative carbon dioxide lesion was rapid, less manipulation was required, and bleeding was minimal. Complications like persistent periorbital edema, secondary bacterial infection, and post-inflammatory hyperpigmentation were not seen. Suturing of wounds helped in minimizing this complication in our study.

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Abstract N°: 5479

Adaptogen technology for skin resilience benefits

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Introduction & Objectives

Skin undergoes constant changes, providing capabilities to repair and renovate its constituents once damaged and a fundamental shield to contrast environmental stress. Ultraviolet Radiation and pollutants (particulate matters, PAHs) contribute to skin aging and functional decline inducing harmful oxidative modifications of macromolecules and stress-related skin disorders. Innovative approaches to preserve skin are needed.

Materials & Methods

Human skin keratinocytes were treated (or not) with a combination of ingredients (*Lactobacillus plantarum* extract, Withania somnifera root extract, Terminalia ferdinandiana fruit extract; "MIX") in presence or absence of stress (oxidative stress or pollution). The effects of MIX Adaptogen Technology on cellular resilience, regulation cellular functions and regeneration of skin were disclosed by proteomics expression and bioinformatics analysis. Mass spectrometry analyses were performed and mining using Ingenuity Pathway Analysis, Qiagen. Then carbonylated proteins were extracted from collected supernatants concerning organelles proteins (mitochondrial) or nuclear (histone enriched) protein, then labelled with a specific fluorescent probe. Mitochondrial function evaluation was conducted by *in situ* treatment of cells with MitotrackerÒ probe.

Two clinical trials were performed to evaluate a formula containing (*Lactobacillus plantarum* extract 0.5%, Withania somnifera root extract 1%, Terminalia ferdinandiana fruit extract 0,413%) on women. In the first trial volunteers' skin was exposed to surface aggression using stripping on forearm and transepidermal water loss (TEWL) was evaluated. In the second clinical trial a sebum collected on volunteers were altered by cigarette smoke and UVA. Squalene and its oxidized products were analysed.

Results

The deleterious impact of stressors has been evidenced, as well as beneficial effects of the MIX through mitochondrial activity preservation, NRF2 pathway activation, NADPH production, boosting cellular antioxidant mechanisms, contrasting stress-induced oxidation (carbonylation) of mitochondrial and nuclear proteins.

In the first clinical study, in 24 healthy Caucasian volunteers 18-63yo, the single cutaneous application of the cream on one forearm led to a statistically significant quicker recovery of the TEWL. In addition, in the second trial it shows that the cream formula exhibited an anti-oxidation inhibition of 71%.

Conclusion

The effects of the MIX on increasing cell adaptability and resilience under stress suggesting a beneficial contribution in precision cosmetics and healthy human skin by acting as adaptogen, an innovative approach that may be employed to improve the resistance to harmful stress with a potential favourable impact on skin homeostasis.

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Abstract N°: 5550

The effectiveness of the SMART DNA Therapy Retix.C application on selected skin parameters.

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Introduction & Objectives:

The skin aging is a natural biological process consisting of changes progressing over time, consisting mainly in reducing the biological activity of cells and slowing down regenerative processes. The main factors causing mutation and endogenous aging of cells are free oxygen radicals that damage cell structures, in particular peptides and genetic material. SMART DNA Therapy is a response to endo and exogenous skin aging factors. It provides a strong antioxidant effect, protection of cell DNA and activation of the repair system with high tolerance of the procedure.

Materials & Methods:

The study consist of 20 patients aged between 25 and 50 (average age 36.73±6.43 years). The patients had a skin phototype 2 (6 people), 3 (12 people) and 4 (2 people) according to the Fitzpatrick classification SMART DNA procedures were performed in each patient at two-week intervals (total therapy time - 6 weeks). Between treatments, the patient was required to use Ferulic Triple C-serum 2x a day and photoprotection. In addition, before each visit related to the procedure, the following were performed: photographic documentation, videodermoscopic examination, skin pH test, TEWL and sebometry.

Results:

In all patients reduction of epidermal hyperpigmentations and erythema was observed. Additionally improvement of skin elasticity was confirmed.

The mean skin pH before treatment was 6.18±0.41, after week 2 5.95±0.47, after week 4 5.63±0.34, and after week 6 5.48±0, 49. The compared differences were statistically significant ($p<0.05$).

The mean TEWL level before treatment was 12.91±0.63 g/h/m2, after week 2 11.52 ±0.69 g/h/m2, after week 4 10.41±0.64 g /h/m2, and after week 6 9.46±0.66 g/h/m2. The results were statistically significant ($p<0.05$).

No statistically significant differences in sebum secretion were observed before and after the treatments

Conclusion:

SMART DNA Therapy is an effective anti-aging treatment suitable for all skin types. The treatment can be used all year round. The treatment can also be a valuable supplement to other treatments in the field of aesthetic medicine.

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Abstract N°: 5589

Scrotal angiokeratoma successfully treated with ND YAG laser

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Introduction & Objectives:

Angiokeratomas are asymptomatic, benign cutaneous vascular tumours that can be difficult to differentiate clinically from other tumours. They present as papules with a scaly surface that sometimes bleed spontaneously. Treatment is often not necessary. However, the demand for radical treatment is for aesthetic and functional purposes. Several therapeutic modalities are available including laser therapy. We report the case of a patient with a usual location of angiokeratoma on the scrotum, who was successfully treated with 1064 nm long pulse ND YAG (Frequency Doubled Neodynium: YAG) laser therapy.

Materials & Methods:

This is a clinical case whose diagnosis was based on clinical and dermoscopic analysis with histological confirmation.

Results:

A 39-year-old man, followed for a hepatic cirrhosis complicated by portal hypertension under anticoagulant treatment and a stage III varicocele, consulted for painless, non-pruritic and spontaneously bleeding lesions in the scrotum that had been progressively evolving for 4 years. The dermatological examination revealed multiple erythemato-violine papules and angiomatoses of 2-4 mm with a slightly scaly surface on the scrotum. On dermoscopy: red and dark lagoons. The rest of the skin examination showed a varicose cord under the skin on the left testicle. Skin biopsy confirmed the diagnosis. Given the patient's aesthetic and functional discomfort, treatment with a long-pulse ND YAG laser of 1064 nm, energy 200 joules were recommended with a satisfactory evolution after 2 sessions of 2 months interval. The laser treatment was performed under local anaesthesia, holding the skin containing the lesions between the fingers to avoid any effect of the laser energy on the testicles. Initial reactions to the treatment consisted of minimal swelling or localized pain. These reactions are transient. An antibiotic ointment was applied to the treated skin areas for 10 days followed by a healing cream. No recurrence was observed over a follow-up period of 1 year.

Conclusion:

We suggest the efficacy of single and repeated ND YAG laser, targeting the vascular component, in the treatment of scrotal angiokeratomas with less mutilating scarring and less risk of recurrence which remains the choice over surgery.

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Abstract N°: 5731

Safety, Efficacy, Satisfaction and Duration of PrabotulinumtoxinA in Latin-American Women

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Introduction & Objectives:

Botulinum toxin A injection is the most commonly performed non-surgical aesthetic procedure. Several studies have demonstrated the safety and efficacy of various types of botulinum toxin A, including OnabotulinumtoxinA (OnaBotA), AbobotulinumtoxinA, and IncobotulinumtoxinA. PrabotulinumtoxinA (PraBotA) is a novel Type A botulinum toxin that has been approved for aesthetic use only, in the United States, Canada, Australia, and recently Chile. Multiple phase III studies have demonstrated the safety and efficacy of 20U of PraBotA for the treatment of moderate to severe glabellar lines, with similar results to OnaBotA, but at a 20-30% lower cost.

There are no studies regarding the safety, efficacy, satisfaction, and duration of PraBotA done exclusively in the Latin-American population. Therefore, the aim of this study is to determine said variables in Latin-American women.

Materials & Methods:

Uncontrolled clinical trial including 46 Latin-American women between the ages of 25 to 50, with mild to severe glabellar lines according to the 4-point Glabellar Line Scale (GLS). Patients were independently evaluated by five dermatologists. The initial evaluation included GLS estimation, clinical photographs, and digital facial analysis (DFA). Afterward, 50U of PraBotA were injected in the upper third of the face in a standardized pattern, by physicians in training. Follow-up was performed 2 weeks after the procedure, where GLS estimation, photographs, and DFA were re-assessed. Improvement of ≥ 1 point in basal GLS categorization were considered as *responders*.

Monthly remote follow-up was performed to determine the duration of the effect. Once the patients reported attenuation of the effect, re-evaluation with photographs, DFA and GLS was done. Patient satisfaction was assessed according to the 5-point Subject Satisfaction Scale.

Results:

Average GLS estimation at a maximum frown was *Moderate* at baseline, and *None* 14 days post-treatment, with a response rate of 95.65% (**Table 1**).

Table 1: Glabellar line estimation according to the 4-point Glabellar line scale (GLS).

	Basal GLS estimation	GLS estimation 14 days post-treatment
None	0	34
Mild	20	11
Moderate	17	1
Severe	9	0
Response rate	95,65%	

Patient satisfaction averaged *Very Satisfied.* Response times and complications are detailed in **Table 2**. All reported complications were mild, transient, and subsided spontaneously without requiring any other interventions.

Table 2: Average response time and complications of the procedure.

Average response time (days)
Frown
Frontal
Periocular
Pain (average VAS scale 1 to 10)
During the procedure
After the procedure
Ecchymosis (n)
Frown
Frontal
Periocular
Asymmetries (n)
Frown
Frontal
Periocular
Other adverse effects (n)
Headache
Diplopia
Ptosis

Conclusion:

PraBotA is a safe, effective option with a clinical response similar to OnaBotA. Reported response rates are consistent with studies conducted in other populations.

The adverse events reported were all mild and transient, mostly headache and ecchymosis. This could be due to its application by physicians in training and to the profile of young patients; however, it does not differ from other

reports. The response and safety profile were maintained at 90 days. Therefore, PraBotA represents a safe, lower-cost alternative, with user satisfaction and efficacy comparable to other options on the market, recommended for the training of dermatologists.

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Abstract N°: 5753

Efficacy of Er YAG laser in the treatment of Alopecia Areata unresponsive to conventional therapies : A pilot study

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Introduction :

Various modalities of treatment have been tried for alopecia areata. Laser therapy offers an addition or alternative to pharmaceutical and surgical treatment of hair regrowth. Increased growth of hair was seen following 2940nm erbium YAG laser in few very few animal and human studies.

Objectives :

Aim of our study is to know the efficacy of Er YAG laser in the treatment of alopecia areata unresponsive to conventional therapies.

Materials & Methods:

Ten patients of alopecia areata (6 male and 4 female) involving scalp and/or beard were treated with the non-ablative Er:YAG laser (SMOOTH TM mode, 7 mm spot size, 7.00 J/cm 2 to 7.75 J/cm 2 pulse fluence, 3.3 Hz frequency) as a monotherapy in patients not responding to conventional treatment. The patient underwent 4 sessions done 4-6 weeks apart. Standardized photography was taken from each patient of the patches in case of alopecia areata. SALT scoring was done at each visit. The patient satisfaction after 4 visits was measured on a 4-point scale (0- not satisfied, 1-somewhat satisfied, 2- satisfied, 3- very satisfied).

Results:

Photographic evaluation of the patients revealed a mean percent change in SALT score of 49 ± 3.1% at follow-up. A total of 7 patients who were treated for patchy AA of the scalp showed 53.8 ± 1.9% regrowth. 3 patients who were treated for AA of the beard had 39 ± 33% regrowth. Patient satisfaction post procedure was grade 2 in all patients. No adverse effects were noticed.

Conclusion:

The non-ablative Er:YAG laser SMOOTH ™ mode as a monotherapy in resistant cases, is an

efficient and safe treatment for alopecia areata with significant improvement of the SALT score.

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Abstract N°: 5755

Fractional CO2 laser combined with TCA for the treatment of keloid scars

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Introduction & Objectives:

Scarring is a complex phenomenon.

There are two types of pathological scarring: hypertrophic and keloid.

The therapeutic arsenal is wide, laser and trichloroacetic acid have demonstrated their effectiveness.

The aim of our work was to evaluate the effectiveness of a protocol based on the combination of fractionated CO2 laser + TCA 30% in the treatment of keloid scars.

Results:

Five patients were included in the protocol, 4 women and 1 man, the average age was 42 years, all patients were phototype IV.

The number of sessions was 5 sessions at 4 weeks interval, The parameters used of the fractional CO2 laser: a Fluence of 30 mj/cm2, Density 0.6 mm, Penetration time: 2ms, Trichloroacetic acid: at 30% applied immediately after the laser.

The technique used consists of creating microscopic channels by the Fractionated CO2 laser which directly conduct and carry the TCA into the deep skin tissue.

Trichloroacetic acid (TCA) induces ultrastructural changes in the epidermis and dermis. It improves the morphological appearance of collagen and elastin. It acts by depositing new collagen and normalises the elastic tissue that has been destroyed by the overproduction of collagen I and III and can therefore be used in keloids.

Conclusion: Our protocol has demonstrated the effectiveness of combining the fractional ablative CO2 laser with the immediate application of 30% trichloroacetic acid.**

On the other hand, we present only preliminary results; further study is therefore desirable to confirm the results.

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Abstract N°: 5878

Efficacy of innovative 532 nm and 1064 nm picosecond laser in treatment of hyperpigmentations, scars, skin texture and tattoos. Clinical cases.

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Introduction & Objectives:

Picosecond lasers, known from years as effective technology for the clearance of tattoos and pigmented lesions, now give us opportunity to treat in a fast, save, non-invasive and more effective way hyperpigmentations, scars, skin texture and tattoos as well, using LIOB process created by DOE technology. Thanks to the photoacoustic effect caused by an ultra-short pulse, with thermal tissue damage limited to minimum, different picosecond lasers are used in the treatment of even the most difficult pigmentation changes such as melasma or PIH for various skin phototypes, eliminating the limitations of nanosecond lasers or IPL and derivatives. Creating the strong LIOB effect in tissues - laser-induced optical breakdown (generated using a full or fractional spot) is crucial. Strong LIOB enhance effect of tissue healing, and thus increased production of collagen and elastin with a short recovery period and break down the dye (melanin and artificial dyes/ink) in tissues into microparticles „visible" for macrophages. Since picosecond technology appeared on the market, lasers differing in the length of the pulse duration and peak power have been created, but in fractional heads they have mainly been based on the MLA (microlens array) technology. The unique innovative picosecond DOE technology - diffractive optical elements - in the 532 nm and 1064 nm fractional head, the stability of the output energy and one of the shortest pulse duration, and thus maintaining the peak power, create stronger LIOB effect. The stronger LIOB effect we create the better clinical results we observe. Additionally, the special unique solution allows us work selectively at three different depths of penetration of the laser beam. Depending on clinical indications we can choose one or more depths - from deep dermal to intraepidermal action.

Materials & Methods:

The innovative picosecond DOE technology 532 nm and 1064 nm laser was used for treatments of hyperpigmentations, scars, skin texture and tattoos removal. Wavelength, handpiece, and depth of penetration of the laser beam for fractional 1064 nm head was chosen depending on clinical indications. Before and after photos has been taken.

Results:

Before and after photos of clinical cases demonstrate the efficacy of using fractional tools of both 532 nm and 1064 nm wavelength in unique DOE technology.

Conclusion:

Thanks to the efficacy of this unique, innovative, 532 nm and 1064 nm DOE-technology picosecond laser, we are able to give our patient visible results even after the first treatment, with minimal or no recovery time and pain.

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Abstract N°: 5901

Adaptogen technology for skin rejuvenation

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Introduction & Objectives:

The skin is the most important organ of the body protecting us from external pathogen. Moreover, especially when we age, the skin is not only subject to external attacks but also to internal attacks which can affect the structure of the skin and consequently its appearance. A more complex approach, to decrease aging signs, is to act on cellular communication. For this type of communication, 3 actives were selected (Lactobacillus plantarum extract, Withania somnifera root extract, Terminalia ferdinandiana fruit extract, "MIX") and our goal is to demonstrate the adaptogenic properties of this mix combination leading skin rejuvenation.

Materials & Methods:

The combination of MIX ingredients was tested using skin human cell culture models with 2D (keratinocytes, fibroblasts) analysis by rtPCR, ELISA, image analysis and evaluation of extracellular vesicle (<150nm).

Three clinical trials were performed to evaluate a formula containing (*Lactobacillus plantarum* extract 0.5%, *Withania somnifera* root extract 1%, *Terminalia ferdinandiana* fruit extract 0,413%) on women. In the first 2 trials hydration from 24 volunteers' skin women were evaluated then cell turn-over was evaluated from 37 volunteers' skin women.

The third trial evaluated clinical performance from 50 Asian females living in urban city, and presenting signs of aging on the face to clinically evaluate aging signs and perceived performance

Results:

On the epidermal compartment, the trio Mix ingredients stimulated the involucrin and Claudin-1 expression on keratinocytes. Moreover, the trio MIX ingredients stimulated fibroblast conditioned media (all soluble factors and extracellular vesicles (exosomes)) that induce proliferation, migration and differentiation of keratinocytes.

On the dermis compartment, the trio MIX ingredients stimulated the maturation of collagen I and collagen III by fibroblast and stimulated production of exosomes to induce Metalloproteinase.

In vivo, the tested formula had a statistically significant moisturizing effect and induced an increase epidermal turnover.

The last clinical study showed significant results as early as week 1 that progress over the time for all parameters. After 2 months of study done, all parameters were significantly improved: wrinkles visibility (-21.08%), fine lines (-25.00%), skin tone evenness (-22.75%), radiance (-33.03%), plumpness (-26.03%), smoothness (+-38.05%), skin tonicity (-27.56%) and skin firmness (-27.56%). These data were confirmed by self-assessment evaluations.

Conclusion:

In conclusion, the formula with *Lactobacillus plantarum* extract, Withania somnifera root extract, Terminalia ferdinandiana fruit extract, show in vitro effects on keratinocytes and fibroblasts and stimulated exosome to

facilitate cellular communication and skin adaptation. The results obtained in 3 different clinical studies show efficacy on hydration, cell turnover and aging signs.

C1 - Internal use

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Abstract N°: 5913

Understanding the Pathophysiology of Sleep Wrinkles through High Frequency Dermatological Ultrasound: A Case Report

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Introduction & Objectives: Wrinkles are a natural and inevitable process that will occur to any aging skin, and with the increase in life expectancy and the importance of aesthetic beauty to oneself, facial rejuvenation has become an increasingly sought after complaint. The changes that occur in the skin over the years, affect bone and muscle structures of the face, and are the consequence of intrinsic factors such as the loss of collagen and elasticity and extrinsic factors such as gravity and mechanical compressions during sleep, leading to alterations that occur asymmetrically on the face. The objective of this study is to document how sleep positions contribute to the development of face wrinkles which will help us understand their pathophysiology and work on preventing their appearance.

Materials & Methods: Changes in the skin layers of a 50-year-old female patient without previous aesthetic procedures were evaluated using High Frequency Dermatological Ultrasound (HFUS) in the temporoparietal and zygomatic topographies bilaterally.

Results: Atrophy of the skin volume on the left temporoparietal region was noted compared to the right side. In fact, the skin overlying the parietal region on the right was evaluated with HFUS and the epidermis measured 0.03 cm, the dermis 0.10 cm, and the hypodermis 0.16 cm; on the left side, which is the sleeping side of the patient, these values were 0.03 cm for the epidermis, 0.07 cm for the dermis, and 0.12 cm for the hypodermis, thus showing an important reduction in the dermal and hypodermal layers. Similarly, the skin overlying the temporal region on the right was evaluated and the epidermis measured 0.01 cm, the dermis 0.10 cm, and the hypodermis 0.14 cm; on the left side, these values were 0.01 cm for the epidermis, 0.08 cm for the dermis, and 0.12 cm for the hypodermis, thus showing a small reduction of the dermal layer and subcutaneous tissue.

Conclusion: This case allows us to conclude that lateral decubitus sleep positions that generate sustained compressive forces on the face against the pillow or mattress can influence the volume loss of the dermal layer and subcutaneous tissue of the temporoparietal and zygomatic region over time, contributing to the development of sleep wrinkles, primarily on the cheeks, forehead, and chin regions. The reduction in the thickness of these layers in particular suggests that sleep wrinkles contribute to the loss of skin elasticity and the formation of permanent lines and may impact the extracellular matrix, collagen production, and blood flow, thereby influencing the overall integrity and appearance of the skin. These findings could explain the mechanism behind the asymmetric appearance of sleep wrinkles. A better understanding of sleep wrinkles will facilitate the development of personalized treatment for individuals seeking to maintain youthful and healthy-looking skin.

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Abstract N°: 5924

Clinical evaluation of the efficacy and tolerability of an anti-dandruff cosmetic shampoo containing organic mentha piperita leaf water, under dermatological control

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Introduction & Objectives:

Dandruff is a common scalp condition associated with flaky scalp skin and pruritus even when it is not induced by a disease. It requires an appropriate treatment to ameliorate the symptoms of scaling and itching.

The objectives of this study were to evaluate the anti-dandruff efficacy and cutaneous tolerability of a cosmetic shampoo and its persisting action, under dermatological control.

Materials & Methods:

This exploratory study was performed in the GCP spirit to evaluate the efficacy and tolerability of an anti-dandruff treatment applied once daily on dry scalp for four consecutive weeks.

Twenty-five healthy men and seven healthy women aged 21-58 years (*average 43 years*) were included in this study. They all presented moderate dandruff at inclusion and itchy or irritated scalp. They were common users of anti-dandruff products and were included with a wash-out period of 14 days.

The evaluation of efficacy was performed after 4 weeks of product application in normal conditions of use and compares to baseline assessments, through:

- Clinical scoring by a Dermatologist (using 0-9 analogical scale) of :
  - Dandruff number *in situ (on scalp)*
  - Dandruff size *in situ (on scalp)*
  - Exfoliated flakes number and size (after a controlled 10 seconds brushing upon a black support)
- Self-assessment by the subjects (using 0-9 analogical scale) of :
  - Dandruff number *in situ (on scalp)*
  - Dandruff size *in situ (on scalp)*
- Self-assessment questionnaire by the subjects to evaluate the efficacy

The same evaluations were also performed after a 2-weeks remanence period with the application of a neutral shampoo with no anti-dandruff action.

The cutaneous tolerability was assessed by a Dermatologist after 28-day application.

Results:

After 28 days of daily use, a significant improvement in the average clinical score of dandruff number*in situ* (-41%, $p<0.001$) and of dandruff size *in situ* (-38%, $p<0.001$) were observed by the Dermatologist, as compared to baseline. Moreover, the number and size of exfoliated flakes significantly decreased (respectively -39% and -35%, $p<0.001$).

Furthermore, the self-assessment by users confirmed that *in situ* flakes number and size were significantly reduced by -43% and -40%, respectively ($p<0.001$).

According to the self-assessment questionnaire, the texture and perfume pleasant for 100% of users. They all were satisfied by the anti-dandruff action to the product, while for 97% of them, the itching was soothed after 28 days of use.

Two weeks after stopping the use of the shampoo, all parameters remain statistically significant*in situ* with less dandruffs (-42%, $p<0.001$) and smaller dandruffs (-36%, $p<0.001$). The number of exfoliated dandruffs significantly decreased (-35%, $p<0.001$) as well as their size (-35%, $p<0.001$).

Self-assessment done by the subjects showed a reduction of the number and size of*in situ* dandruffs (-42% and -41% respectively ($p<0.001$). After 2 weeks of no use of the product, 97% of volunteers agreed to a persisting anti-dandruff action of the product.

The product was very well tolerated, as judged by the Dermatologist.

Conclusion:

The study results showed the very good tolerance and the significant efficiency of the cosmetic shampoo in decreasing the number and the size of scalp flakes and reducing pruritus when applied daily for 28 days; its efficacy remained stable after a 2-week remanence period.

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Abstract N°: 5962

Clinical evaluation of the efficacy of a night detoxifying recovery cosmetic face care containing two Breton extracts from microalgae and nasturtium

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Introduction & Objectives:

Many cosmetic products claiming "detoxifying" or "recovery" activity are commercialised, but few have demonstrated their efficacy in clinical studies with objective clinical evaluations.

Skin smoothing and plumping effects are three signs that can be assessed through instrumental measures. Skin oxydation can be assessed in vitro on skin explants by measuring biomarkers such as protein oxidation or detoxifying enzymes like NRF2.

The objective of this study was to evaluate the efficacy of a night detoxifying recovery care using instrumental methods and in vitro assays on explants

Materials & Methods:

These exploratory studies were performed to evaluate the efficacy of a night detoxifying recovery care applied once daily on face for 28 days.

Three studies were performed :

- A clinical evaluation on twenty-one healthy women, aged from 48 to 73 years (*average 61 years*). The evaluation of efficacy was performed immediately or after 4 weeks of product application, through: images and analysis of the topography of the micro-relief on Silflo impressions to assess smoothing effect and corneometry measures to assess moisturizing effect
- A use test on 105 consumers aged from 36 to 74 years (average 52 years) to assess their product perception
- An *in vitro* test on explants after four product application and pollution exposition to assess detoxifying effect

Results:

Immediately after application, depth, volume and roughness of skin relief are significantly decrease by respectively -22%, -22% and -24% in at least 81% volunteers ($p < 0,001$). After 28 days the parameters are still improved with -10% depth, -11% volume and -11% roughness in 76% volunteers ($p < 0,05$). Moreover, moisturizing index was also significantly enhanced immediately (30 minutes and 1 hour after application) and even after 28 days (+48% at 30 minutes, +40% at 1h in 100% volunteers and +11% at 28 days for 90% volunteers ($p < 0,01$).

Furthermore, the in vitro test on explant show that the product completely prevents pollutant- induced Nrf2 activation and partially reduces pollutant- induced AhR activation and oxidized proteins.

Finally, 89% users find their skin refreshed on waking, 88% find a better recovery of their skin and it seemed

repaired after 28 days and 86% find that day by day it looks like detoxified.

Conclusion:

This study demonstrated the significant efficiency of this night care in detoxifying skin after pollution exposition, smoothing and moisturizing effect when applied once daily for 28 days.

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Abstract N°: 6033

Clinical evaluation of the moisturizing efficacy of a cosmetic serum containing Carpobrotus edulis extract, using two non-invasive in vivo methods

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Introduction & Objectives:

Hydration is an essential element for skin homeostasis. The lack of water that characterizes dehydrated skin is a transient state. It can affect all skin types regardless of their nature (oily, dry or combination skin). That's why this efficiency is sought for most facial care.

The objective of this study was to assess the moisturizing effect of a facial serum and its mechanisms of action using two different non-invasive *in vivo* methods of measurement

Materials & Methods:

In this open label exploratory study performed in GCP spirit, 23 healthy women aged 46 to 73 years (mean 66 years old) were included. 9% had normal skin and 91% had dry to very dry skin. The product was used twice a day on forearms for 28 days.

The serum moisturizing efficacy was evaluated at different timepoints:

- At D28 *versus* baseline (non-treated skin),
- 72 hours after one single use *versus* 72 hours after 28 days of use to measure a residual effect.

For each time, the efficacy of the serum was performed by:

- Corneometry, the hydration reference method
- Raman spectroscopy, to measure the thickness of *Stratum corneum*, the proportion of free water, bound water and total water in the skin and the barrier function condition

The cutaneous tolerance was evaluated by a dermatologist after 28 days of twice daily use.

Results:

After 28 days of twice daily use of the serum, corneometry results showed a significant increase of skin hydration index (+23%, $p<0.05$). Raman spectroscopy allowed to define the evolution of the total water in the skin (+44%, $p<0.05$) and the proportions that represent the free and bound water (respectively +48% and +41% compared to non-treated skin, $p<0.05$). These parameters characterize the hydration power of the serum tested.

The results had been confirmed by a significant increase of +18% ($p<0.05$) in the thickness of the *Stratum corneum* and an enrichment of the protein fraction of the surface skin layer (+7%,$p<0.05$) that reflects an improvement in the barrier function.

In addition to these measurements, we compared the 2 methods on the residual effect of hydration by the serum. 72 hours after 28 days of use, an increase of the moisturizing effect was shown by corneometry compared to 72 hours after one single use (+7%, $p<0.05$).

The residual effect was confirmed by Raman spectroscopy with +15% ($p<0.05$) of the total water, +16% ($p<0.05$) of free water and +14% ($p<0.05$) of bound water.

The cosmetic product was well tolerated for all skin types, as judged by the Dermatologist.

Conclusion:

This study showed the complementarity of two non-invasive clinical techniques, corneometry and Raman spectroscopy, to measure the effectiveness of a serum on skin hydration. The first one is a simple and quick measure that provides information on the state of hydration of the corneal layer. The second one is more complex and multiparametric. It allows a more in-depth assessment of the hydration capacity of a cosmetic product or ingredient. In this study, different mechanisms of action were demonstrated and validated for the hydrating effect of the serum. They thus opened up new avenues of claims.

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Abstract N°: 6053

Anti-aging benefits of a plant-based peptides complex on different skin layers

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Introduction & Objectives:

Skin aging is a complex biological process influenced by a combination of endogenous and exogenous factors. These factors lead to structural and physiological alterations and progressive changes in each skin layer and consequently in skin appearance. Peptides are interesting cosmetic ingredients, and their use has been continuously growing. Most of them are obtained by chemical synthesis. Plants can be an extraordinary source of peptides. In this study we characterized a natural peptides complex extracted from linseed, lupine and pea obtained by green extraction processes. This peptide complex was then tested in vitro and in vivo to assess its skin efficacy.

Materials & Methods:

Using molecular networks and de novo sequencing technology, number and structure peptides were identified. Using bioinformatic tools, peptides were linked to plant as well as skin proteins to identify potential biological targets.

The peptide complex was tested using skin cell culture models with 2D and 3D human wound healing model.

Two clinical trials were performed to evaluate the formula containing 4% linseed, 0.2% lupin and 0.3% pea on Asian women (45-62 years old), and all phototypes women (30-65 y.o.) including 50% sensitive skin and all skin types. These studies were conducted to evaluate safety, aging signs and perceived performance.

Results:

The 3 plant extracts contain 373 types of peptides associated with skin proteins.

In vitro, the 2D and 3D reconstructed models show that the plant extracts alone and in combination significantly stimulate the re-epithelialization (Keratinocyte's migration), dermo-epidermal cohesion (Laminin 5, Perlecan, Syndecan, collagen IV and VII) and dermal matrix remodeling (Collagen I and III, Metalloproteinase-1): all linked to skin regeneration.

In vivo, the clinical studies show significant results as early as week 1 and progress over the time. In the first 12 weeks study done in China, all parameters are significantly improved: fine lines (-46.45%), wrinkles (-41.24%), ptosis (-40.12%), plumpness (+39.26%), firmness (+33.77%), smoothness (+41.51%) and radiance (+33.54%). In the US, a 12-week study on all phototypes showed a significant improvement on all parameters: fine lines (-25.25%), wrinkles (-19.67%), ptosis (-24.92%), dark spots

(-21.25%), plumpness (+38.36%), firmness (+33.59%), smoothness (+47.44%) and radiance (+18.64%). These data were confirmed by self-assessment evaluations.

Conclusion:

In conclusion, the formula with a natural peptide complex containing the 373 peptides associated with the skin proteome showed in vitro effects on keratinocytes and fibroblasts and 3D models linked to skin regeneration. The results obtained in 2 different clinical studies show the effects of a formula with the natural peptide complex on different aging signs by correcting wrinkles, fading dark spots, and lifting the skin of the face and neck.

C1 - Internal use

EA DV CONGRESS
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Abstract N°: 6094

Assessment of the 24h and 48h anti-perspirant efficacy of a cosmetic product using an in vivo reference method and an alternative innovative in vitro method

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Introduction & Objectives:

Perspiration is an essential biological mechanism to maintain body temperature. However, sweating may cause unpleasant inconveniences: wet sensation and malodor. That is why, cosmetic industry has developed anti-perspirant product, able to reduce or block sweat production. The main action is based on humidity control. Efficacy of such product is commonly assessed *in vivo* by standard gravimetric method.

Recently, apparition of alternative method that mimics sweat production and absorption mechanisms open the way to a new approach to screen the antiperspirant effect.

The first objective of this comparative study was to evaluate the clinical efficacy of an antiperspirant during 48h, with gravimetric reference method. The secondary objective was to compare this conventional *in vivo* method to an alternative *in vitro* approach, to assess the relevance and correlation between the two techniques.

Materials & Methods:

The Gravimetry study was conducted on 23 healthy women aged 23 to 59 years (mean 40 years) with profuse sweating. to assess anti-perspirant performance in sweat absorption after 24 and 48 hours. The sweat secretion was collected under volunteers' armpits after exposure to hot atmosphere. Pads were weighed and then placed under armpits. After 20 minutes in a sauna, pads were weighed again to evaluation sweat quantity.

The ability of the product to block sweat secretion was analyzed using a Smart Pore® technology. This method is based on microfluidics, the sweating mechanism is reproduced in a controlled environment with programmable temperature (25°C) and humidity (80%). The Smart Pore® technology reproduces human skin for sudation mechanism to evaluate the formation of plugs inside the pores that will block the sweat secretion. Four different parameters were analyzed with a programmed software: number of blocked channels in comparison to the total number (coverage rate), pressure necessary to eject the clot formed(burst pressure), average length of the clots, average time to completely block a pore with a clot

Results:

The *in vivo* gravimetry method showed the efficacy of the antiperspirant product on sweat production at 24 hours (-44%, $p<0.01$) with 79% of responders. At 48 hours, the results demonstrated a significant decrease in sweat secretion (-60%, $p<0.01$) in 83% of users. Those better results than 24 hours can be explained by the capability to reach a plateau that stabilizes the sweat secretion capacity.

The i*n vitro* Smart Pores® technology showed better results than those benches with a 86% coverage rate, 981 ± 24 mbars burst pressure, an average clot length of 438 ± 32 µm and a clot formation time of 1685 seconds. Those results allowed to conclude that the product had an antiperspirant effect of at least 48 hours.

Conclusion:

Using the gravimetric method, study results showed that this roll-on was effective in controlling sweating during 48H. The smart pore® technology revealed higher results for our product than benchmark product claiming 48H efficacy. More data need to be added to assess the relevance of this alternative method. Nevertheless, these studies allow us to think that smart pore® could be a good predicting model to *in vivo* method and could be used to assess the efficiency of anti-perspirant cosmetics in early step of product development or to compare ingredient efficacy.

Acknowledgement: Fabrice Monty, µFactor

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Abstract N°: 6097

Designing specific skin care formula against aggressions even in extreme conditions

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Introduction & Objectives:

Skin barrier can be damaged by external aggressors such as: harsh cleanser, seasonal changes, climatic conditions: low humidity, low temperatures… It can negatively affect the skin and leads to deterioration of already compromised skin. People living in equator far countries such as the Northern parts of Europe and North America are exposed to harsh weather during the winter and may experience dry and itchy skin.

In different studies we evaluate a specific formula designed to act on skin barrier to help its recovery in front of multiple aggressions with and without harsh environmental conditions.

Materials & Methods:

The formula is a serum containing 7 pre- and probiotics fractions including *Bifidobacterium longum, Saccharomyces cerevisiae, Lactobacillus extracts*, long polysaccharides, and short sugar.

Formula performance was assessed in three studies after single or multiple use. Volunteers skin was exposed to surface aggression using specific cleanser study 1 or abrasion (8 round trips, constant pressure using emery paper) study 2 or stripping (till ≥ 20g.m-2.h-1) in hot or cold condition study 3.

Transepidermal water loss (TEWL) was evaluated using Tewameter 300 COURAGE KHAZAKA on forearm or using Aquaflux AF100 System on face and pH by COURAGE KHAZAKA PH 900 on face.

Results:

In the first study, in 30 healthy Chinese and Caucasian volunteers 55-65yo, the skin face harsh cleanser increases pH, and TEWL. Repeat application of the serum twice a day for 15 days led to a significant faster recovery of skin face quality attribute compared to bare skin, as early as the first application.

In the second study, in 29 healthy Caucasian volunteers 18-60yo, the repeated cutaneous application of the serum twice a day for 28 days, on one forearm led to a significant more stable skin against abrasion compared to bare skin based on TEWL measure.

In the third study, in 24 healthy Caucasian volunteers 18-65yo, the single cutaneous application of the serum on one forearm led to a statistically significant quicker recovery of the barrier function (TEWL) from 1h after stripping compared to bare skin forearm, in normal, hot (+40°C) or cold (+4°C).

Conclusion:

In conclusion, these findings show that a specific designed cosmetic formula serum containing a combination of 7 pre- and probiotics fractions is able bring a quicker recovery of skin barrier after different kind of aggressions (cleanser, stripping) in extreme conditions or not. In addition, lead to 5 times more stable skin against skin abrasion.

C1 - Internal use

EA DV CONGRESS
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Abstract N°: 6243

Liquid Vitamin E Injection for Cosmetic Facial Rejuvenation and Disaster Lipogranuloma of the Face: A case report and literature review

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Introduction & Objectives:

Lipogranuloma is one of the complications of vitamin E injection for cosmetic rejuvenation. It mostly represents with inflammation, edema, erythema, and tenderness. Since there was no standard treatment for this complication, management of these patients is challenging.

Herein, we report a case of liquid vitamin E injection for cosmetic facial rejuvenation and development of facial persistent erythema and induration. Also, we review the reported cases of vitamin E injection for cosmetic facial rejuvenation.

Materials & Methods:

A 50-year-old woman presented to the outpatient dermatology clinic with facial erythema, edema, and tenderness following liquid vitamin E injections to the face, by a non-physician person in a hairdressing salon, approximately 3 months earlier. On the facial examination, the patient's cheeks were symmetrically swollen, inflamed and red, and in the left cheek, a necrotic wound was seen. These facial lesions severely affected the patient's social life.

Results:

The possible diagnosis of lipogranuloma of the Face was made for the patient. The treatment with oral prednisolone 50 mg per day was initiated for 4 weeks. After two weeks of oral corticosteroid administration, there was no significant therapeutic response and inevitably azathioprine 50 mg twice daily and minocycline 100 mg daily were added to the patient's treatment regimen.

Conclusion:

The use of vitamin E for Facial rejuvenation is a dangerous practice and is associated with potential local, and sometimes systemic and life-threatening complications. Clinicians should be aware of complications induced by the injection of illegal products for tissue augmentation. Also, regulatory organizations should monitor illegal beauty centers and enact restrictive laws.

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Abstract N°: 6279

A Case of Linear Lichen Planus Treated with Qs-Nd:yag Laser and Tacrolimus

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Introduction & Objectives:

Linear Lichen planus (LLP) is a rare variant of Lichen Planus which is an idiopathic inflammatory skin disease consisting of brown-to-black patches. LLP commonly appears on sites of trauma or after koebnerization, possibly along the lines of Blaschko. Main therapy is high potency corticosteroids.

We report of a case of a 26 year old Filipino female who suddenly presented with 4 month history of brown pruritic macules and patches over her left lower extremity which had progressed to the level of her gluteus during infection with COVID 19. The immune response to infection and during vaccination is similar to LP pathogenesis. The response against COVID 19 elicits a Th1 response, raising the serum levels of IL-2, TNFα and IFNγ which are also involved in the appearance of lichen planus.

Materials & Methods:

A 4x4x4mm Skin punch biopsy of A: left thigh and B: Left leg revealed finding consistent with Lichen planus. Histopathological examination described the specimen as orthokeratosis, irregular psoriasiform epidermal hyperplasia, wedge shaped hypergranulosis with basal layer vacuolization, subepidermal blister formation, pigment incontinence, and dense bank-like lymphohistiocytic infiltrates in the papillary dermis.

Treatment is not always necessary as some cases of LLP resolve on their own. Superpotent corticosteroids are the first line treatment for this condition but for those lesions on sensitive areas or for those resistant to treatment, as in this case where lesions were only noted to have minimal improvement after 3 months of topical corticosteroid treatement, we present an alternative.

The standard, Clobetasol 0.05% cream was applied twice daily on a lateral portion of the lower extremity whereas the comparator, Tacrolimus 0.03% ointment was applied twice daily with addition of Q-switched Nd:YAG laser** (1064nm) at fluence of 0.9j/cm3; delivered with multi-pass technique with spot size of 8 targeting melanin done every 2 weeks.

Results:

The latter resulted in progressive lightening after two sessions. Supportive management with sun protection and prevention of Koebner phenomenon was done. Continued improvement is expected in line with literature where the comparator shortened disease duration from three years to only a few months.

At the time of submission, the monotherapy site has persistent multiple brown macules while comparator site where combination therapy was administered presents with only a few skin-colored macules.

Conclusion:

This case provides evidence of novel LP etiology as well as alternative treatment with Q switched NDYag laser for poor response to standard corticosteroid regimen. The combination of calcineurin inhibitors and Q-switched Nd:YAG laser treatment can be offered for pigmented lesions slowly responding to corticosteroid application with

good results.

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Abstract N°: 6429

Successful treatment of dermatosis papulosa nigra with 1064 nm Nd:YAG laser : case report

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Introduction & Objectives:

Dermatosis papulosa nigra (DPN) is a chronic benign skin condition frequently seen in patients with skin of color. It is characterized by hyperpigmented verrucous papules on the face, neck and trunk which can cause significant cosmetic damage. Treatment is often sought for aesthetic reasons. However, therapeutic options are limited.

Materials & Methods:

We report a case of facial DPN treated with 1064 nm neodymium-doped yttrium aluminum garnet (Nd:YAG) laser with an excellent cosmetic result.

Results:

A 45-year-old woman presented to our dermatology departement with a long history of multiple papules on her face that were increasing in number and size over time. She was seeking treatment to reduce the appearance of the lesions on her face. Physical examination revealed that she was a Fitzpatrick phototype IV patient with multiple 1-5 mm dark brown verrucous papules on the cheeks. After a discussion of different treatment options, we decided to use the 1064 nm Nd:YAG laser. A test treatment was performed on few lesions with a 6 mm spot size 1064 nm Nd:YAG laser using a fluence of 150 J/cm2 and pulse duration of 20 ms. The procedure was well tolerated by the patient. A healing cream was applied to the treated areas.

After one month, the patient reported the disappearance of the treated lesions and received treatment for the remaining lesions using the same parameters. Three months after treatment, she was satisfied with the results. Approximately 60% of the laser-treated lesions had disappeared without any scarring or pigmentary changes.

Conclusion:

Although benign, DPN can be cosmetically unpleasant and patients usually request elective removal. Conventional surgical treatments typically cause pigmentary comlications, especially in the case of a common disorder on skin of color. There are many laser treatment options for DPN reported in the literature. However, the 1064 nm Nd:YAG laser has only been used in two cases of facial DPN. These two patients achieved an excellent cosmetic result in one laser treatment with the long-pulsed Nd-YAG at 3 mm spot size, 145-155 J/cm2, and 20 ms pulse duration. No side effects were noted. Patients reported minimal pain and they did not require anesthesia.

The 1064 Nd:YAG** emits light with a wavelength of 1064 nm, in the infrared. Melanin is relatively weakly absorbed at the 1064 nm wavelength, making it safe for use on darker skin phototypes.

This therapeutic option offered excellent results with no side effects. However, we should beer in mind that pigmentary changes and scars remain a potential risk. We recommend treating a few test lesions and making sure the patient is satisfied with the result before proceeding with a full facial treatment.