Abstract N°: 285

Intradermal Versus Intramuscular Injection of incobotulinumtoxin A for crow's feet; Comparative Study

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Introduction & Objectives:

Type A botulinum toxin is a neurotoxin. Incobotulinumtoxin A is manufactured using advanced technology to precisely isolate the pure BoNT without unnecessary clostridial proteins, and with low immunogenicity and high specific activity. This comparative observational study was aiming at comparing the efficacy tolerability of two injection techniques (intradermal versus intramuscular) of incobotulinumtoxin A for crow's feet treatment.

Materials & Methods:

Subjects enrolled in were divided into 2 groups:

Group I (15 cases) were injected with incobotulinumtoxin A intradermally, and Group II (15 cases) were injected intramuscularly. The Flynn validated assessment scale used for grading the severity of wrinkles and those with higher score (15 patients) were included in group II for intramuscular injection The incobotulinumtoxin A in a 100-unit vial was diluted with 2.5 mL of saline. In Group I the injection was done intradermally through a 30 G needle at the most severe wrinkle for three points. In group II the wrinkles were injected intramuscularly at the two most severe wrinkle spots. The efficacy was compared between the two injection techniques and the adverse events were closely monitored. At each follow-up visit, the injected wrinkles were evaluated by determining the indentation index using a standardized mobile camera. The photographs were taken from the front and lateral aspect of both hemifaces while the subject had a resting facial expression and while smiling at maximum contraction. Evaluation of the clinical improvement was done using the FVAS for the upper face . Patient's clinical improvement was assessed using the Global Aesthetic Improvement Scale. The pain score and satisfaction scale was also rated using the visual analogue scale (VAS).

Results:

The Global Aesthetic Improvement Scale show distinct differences in the aesthetic outcomes between the intra-muscular and intra-dermal injection groups. In the intra-muscular group, 13.3% of participants reported improvement, 13.3% much improvement, while 73.3% reported very much improvement. In contrast, in the intra-dermal group, 66.7% of participants experienced improvement, 26.7% much improvement, and only 6.7% very much improvement. There was a statistically significant difference between the two groups (p=0.001), There was a statistically significant higher incidence of pain among intradermal group than intramuscular (93.3% versus 46.7%, respectively), p=0.005. No statistically significant difference was detected between studied groups as regard bruising and static wrinkle (p=1.0 & 0.390, respectively).

Conclusion:

Intramuscular injection of Incobotulinumtoxin A demonstrated superior efficacy compared to intradermal injections for treating crow's feet. The intramuscular approach led to more significant aesthetic improvements and greater patient satisfaction, while also being associated with lower levels of pain. Despite similar complications in terms of bruising and static wrinkles between the groups, the intramuscular technique was notably more effective and better tolerated, making it a preferred option for managing periorbital rhytides.

EADV SYMPOSIUM PRAGUE 22-24 MAY 2025

Abstract N°: 343

Efficacy and safety of 755 nm picosecond alexandrite laser with topical tranexamic acid versus laser monotherapy for melasma: a multicenter, randomized, double-blinded, split-face study

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Introduction & Objectives:

To compare the efficacy and safety of 755-nm picosecond alexandrite laser and topical tranexamic acid (TTA) combination therapy with laser monotherapy, for the treatment of melasma and facial rejuvenation.

Materials & Methods:

This multicenter, randomized, doubleblinded, split-face study enrolled 37 patients who presented with melasma and photoaging. Facial halves were randomized to receive either laser and TTA combination therapy or laser monotherapy. Three treatments were delivered at 4-5 weeks intervals. Patients were followed up for 1, 3, and 6 months post-final treatment and evaluated by blinded investigators for hemi-Melasma Area and Severity Index (hemi-MASI), facial dyschromia, skin texture, laxity, and rhytids. Daily diaries rating healing progress for 7 days posttreatment and satisfaction grading were performed by all patients. Adverse events were recorded.

Results:

Thirty-six patients completed the follow-up. Compared with the baseline, hemi-MASI, dyschromia, and skin texture on both halves improved significantly through the follow-up ($p = 0.000$). A significant difference in hemi-MASI and dyschromia between combination therapy halves and monotherapy halves was noticed at 1- and 3-month follow-ups ($p < 0.05$). The laser monotherapy halves displayed significantly less redness and sensitivity during the 7-day posttreatment recovery period ($p < 0.05$). Patients' satisfaction ratings for the combination therapy halves were higher than the monotherapy halves at 1-month follow-up ($p < 0.05$). No severe adverse events were observed.

Conclusion:

The picosecond alexandrite laser and TTA combination therapy demonstrated synergistic efficacy for hemi-MASI and dyschromia improvements over laser monotherapy. The optimization of the picosecond laser and TTA combination regimen needs further investigation.

Abstract N°: 397

A comparative study on the efficacy of Erbium glass non-ablative fractional laser (1565 nm) with Platelet rich plasma versus Erbium glass non-ablative fractional laser (1565 nm) alone in the treatment of Striae Distensae: A Randomized Controlled Trial (RCT)

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Introduction & Objectives: Striae distensae (SD) result from excessive skin stretching during puberty, pregnancy, or weight gain. SD is classified into striae rubrae and striae albae Although harmless, SD visibly impacts self-esteem and quality of life.Non-ablative fractional lasers like the Erbium Glass (1565 nm) stimulate collagen production, improving skin structure.Platelet-rich plasma (PRP), rich in growth factors, may further enhance laser outcomes by promoting wound healing,neocollagenesis, and tissue remodelling.This study evaluated the combined efficacy of Erbium Glass laser and PRP versus laser alone for SD.Secondary objectives included assessing safety,patient satisfaction,and differences in blinded versus non-blinded evaluations using clinical images.

Materials & Methods: A prospective,split-comparative study was conducted over six months with 30 patients(17 females,13 males),aged 18–40 years,presenting bilateral SD on the abdomen, thighs, buttocks, flanks, arms, and shoulders.Patients with Fitzpatrick skin types IV–VI and SD ≥6 months were included. Exclusion criteria were pregnancy, lactation, keloid history,recent SD treatments(<6 months),infections,or laser contraindications.Group A received Erbium Glass laser + PRP , and Group B laser alone in same patient. Laser settings involved two passes: 40 mJ,300 spots/cm^2 for the first and 50 mJ,150 spots/cm^2 for the second. Sessions were spaced 4 weeks apart for 5 sessions.The primary outcome was baseline width reduction(in mm) of the largest striae after 6months.Secondary outcomes included patient satisfaction and blinded/non-blinded evaluations of clinical photographs.Statistical analysis included paired and independent t-tests and Pearson's correlation for blinded vs. non-blinded evaluations ($p<0.05$ significant).

Results: Participants had a mean age of 28.4 years, with baseline striae widths of 6.2 ± 0.8 mm (Group A) and 6.3 ± 0.7 mm (Group B) ($p=0.78$).Group A (Laser+PRP) achieved a 64.5% ±4.3% reduction (from 6.2 mm to 2.2 mm),while Group B (Laser Alone) showed a 48.2% ± 5.1% reduction (from 6.3 mm to 3.3 mm).Group A had a 33.8% greater width reduction than Group B ($p<0.001$).Clinical image evaluations using visual analogue scale (VAS) showed high correlation between blinded and non-blinded reviewers ($r=0.78$).Blinded reviewers reported slightly lower improvement percentages.Group A reported higher satisfaction, with a Likert score of 4.6 ± 0.4 vs. 3.8 ± 0.6 for Group B ($p<0.01$).Adverse effects were mild and transient,including pain, erythema, and edema.No severe adverse events occurred.

Conclusion: The combination of Erbium Glass laser (1565 nm) with PRP is more effective than laser alone for treating striae distensae. This therapy achieved a 33.8% greater reduction in striae width and significantly higher patient satisfaction. Both treatments were safe and well-tolerated, establishing this combination as an effective and reliable option for SD management.

EADV SYMPOSIUM PRAGUE 22-24 MAY 2025

Abstract N°: 459

Intradermal Botulinum Toxin A Injection for Scalp Sebum Secretion Regulation: A Multicenter, Randomized, Double-Blinded, Placebo-Controlled, Prospective Study

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Introduction & Objectives:

Although botulinum toxin type A (BTX-A) injection has been proved to reduce topical sebum secretion, the impact of intradermal BTX-A injection on scalp sebum production has never been reported. The purpose of this study was to investigate the efficacy and safety of intradermal BTX-A treatment vs intradermal normal saline (NS) injection for scalp sebum secretion regulation.

Materials & Methods:

This multicenter, randomized, double-blinded, prospective study recruited patients complaining of oily scalp and/or hair. The patients were randomly allocated to receive either 1 session of intradermal BTX-A or NS injection. The baseline and posttreatment scalp sebum secretion at 24, 48, 72, and 96 hours postshampooing was measured with a Sebumeter SM815 (Cutometer Dual MPA 580, Courage & Khazaka, Cologne, Germany) at 1, 3, 4, and 6 months after treatment. The patients' comments, satisfaction, and adverse events were evaluated and compared.

Results:

In total, 25 patients in the BTX-A group and 24 patients in the NS group completed the follow-up. For the treated region, compared with NS, intradermal BTX-A treatment (50-65 U) significantly reduced scalp sebum secretion at 24, 48, and 72 hours postshampooing at the 1- and 3-month follow-up visits ($p<0.05$). No significant difference between the two groups was observed at 4 and 6 months after the treatment. The patients' satisfaction ratings were significantly higher for the BTX-A treatment ($p=0.000$). No serious adverse events occurred.

Conclusion:

Compared with NS, one session of intradermal BTX-A injection (50-65 U) effectively and safely reduced scalp sebum secretion and greasiness perception in the treated region at 24 and 48 hours postshampooing for 3 months.

Abstract N°: 461

Promoting public skin health through a national continuing medical education project on cosmetic and dermatologic sciences: a 15-year experience

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Introduction & Objectives:

The developments in cosmetic sciences and technologies have generated a gap between the cosmetics and their users. Users including regular customers, clinicians, industry personnel, researchers, testing agencies, beauty salon workers, and mass media hardly possess the ability to distinguish truth from falsehood. The gap remained as one major reason for inappropriate cosmetics usage, insufficient efficacy, and even cosmetics adverse reactions (CARs).

Materials & Methods:

Aiming at enhancing the relevant practitioners' cosmetic and dermatologic sciences, we launched a cosmetic and dermatologic sciences continuing medical education (CME) since 2008. The objective of the current study was to evaluate the effectiveness of the CME. We summarized and analyzed the project for the last 15 years. Meanwhile, an online survey consisted of three parts was performed to evaluate the CME and to collect the trainees' comments.

Results:

A total of 3,923 trainees have participated in the CME project from 2008 to 2022. The trainees included clinicians, industry staffs, biomedical researchers, third-party cosmetics testing staffs, beauty salon staffs, students, and media staffs. The trainees had theory courses on cosmetic and dermatologic sciences, cosmetics DIY practice & video watching, and an optional guided tour during the 4.5-day CME. Eight hundred and twenty-three trainees and 586 control subjects responded to the online survey. The comprehensive test in the second part of the survey demonstrated that compared with the control group, the CME project significantly enhanced the trainees' perception and knowledge regarding the cosmetics formula sciences, basic dermatologic sciences, cosmetics usage, noninvasive measurements, new advances, CARs, and laws ($p = 0.000$). Trainees of all occupations ranked "basic dermatologic sciences and skin diseases" as the most significant sections. Trainees of all occupations believed the CME has contributed most in "understand the function & efficacy of cosmetics." We noticed the occupational variances. Over 97% of trainees were willing to recommend the CME to the others.

Conclusion:

The CME project significantly enhanced the trainees' cosmetic and dermatologic sciences, which bridged the gap between cosmetics and public skin health. This multidisciplinary CME also contributed to establishing an interdisciplinary interaction and cooperation platform for the multiple occupations involved in the public skin health maintenance and promotion.

Abstract N°: 465

Correction of Lying Ear and Aesthetic Modification of Helix and Ear Lobule With Hyaluronic Acid Filler Injection: Experience in Chinese Patients

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Introduction & Objectives:

Large and long ears are regarded as symbols of wealth and health in East Asian culture, and people with lying ears often want their ears to be more exposed and prominent. Surgeries to correct lying ears have been documented. The aim of this study was to report the correction of lying ears and the aesthetic modification of helix and ear lobule with hyaluronic acid (HA) injections.

Materials & Methods:

HA injections were performed at the auriculocephalic sulcus to increase the cranioauricular angle (CA) and correct lying ears. The injections at helix and lobule were case specific. The CA was measured and photographs were taken at baseline and at 1-, 3-, 6-, and 10-month follow-ups. Efficacy was assessed with the 5-point Global Aesthetic Improvement Scale (GAIS). Adverse events were recorded.

Results:

Forty-six patients (92 ears) received HA injections and completed follow-ups. Instant correction outcomes were observed. Sixteen (34.8%) patients received 1 touch-up injection, the clinical efficacy of which persisted for 1 to 1.5 years. For over 90% of cases with touch-up treatment the GAIS was “very much improved” or “much improved” at all follow-ups. The GAIS for over 70% of cases without touch-up treatment was “very much improved” or “much improved” at 1-, 3-, and 6-month follow-ups. CA increased significantly compared with the baseline. Patients also reported “more V-shaped face shape” and “lifted jawline” effects. No serious adverse events occurred.

Conclusion:

As an alternative technique to surgeries, HA filler injections at the auriculocephalic sulcus effectively corrected lying ears. This technique produced immediate, long-lasting, and aesthetically pleasing results. The side effects and downtime were minimal.

EADV SYMPOSIUM PRAGUE 22-24 MAY 2025

Abstract N°: 467

Hyaluronic Acid Compound Filling Plus Mesotherapy vs Botulinum Toxin A for the Treatment of Horizontal Neck Lines: A Multicenter, Randomized, Evaluator-Blinded, Prospective Study

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Introduction & Objectives:

Although energy devices and botulinum toxin A (BTX-A) can alleviate age-related laxity, ptosis, and platysmal bands, they have limited efficacy on horizontal neck lines.

Materials & Methods:

The purpose of this study was to investigate the efficacy, safety, and subject satisfaction of a combined treatment of non–cross-linked hyaluronic acid (HA) compound filling plus mesotherapy for the correction of horizontal neck lines, in comparison with BTX-A. This multicenter, randomized, evaluator-blinded, prospective study enrolled female patients with moderate-tosevere horizontal neck lines corrected with either 2 or 3 sessions of of non–cross-linked HA compound filling plus mesotherapy or 1 session of BTX-A injection. Improvement of the neck lines grades, Global Aesthetic Improvement Scale (GAIS), patient satisfaction, and adverse events (AEs) were evaluated and compared at 1, 3, 6, and 10 months after the final treatment.

Results:

Twenty-five patients received HA filling plus mesotherapy and 23 received BTX-A injection. Compared with BTX-A, the HA compound filling plus mesotherapy significantly improved the horizontal neck lines grades on all follow-up visits (p = 0.000). Cases of different baseline grades (2, 2.5, and 3) demonstrated similar outcomes. The GAIS and patients' satisfaction ratings were significantly higher for the HA filling plus mesotherapy treatment group (p = 0.000). Significantly higher pain ratings, higher incidence, and longer recovery of AEs (erythema, edema, and ecchymosis) were noticed in the combined treatment group (p < 0.001). No serious AEs occurred.

Conclusion:

Compared with BTX-A, combined treatment with HA compound filling plus mesotherapy significantly improved moderate-to-severe horizontal neck lines and achieved a high level of patient satisfaction.

Abstract N°: 595

A Randomized, Double-Blind, Split-Face Study of Intradermal Tranexamic Acid Injections for Treating Melasma

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Introduction & Objectives: Melasma is a chronic hyperpigmentation disorder that significantly affects quality of life and is often associated with multiple factors, including hormonal influences, UV exposure, and genetics. Tranexamic acid (TXA), an antifibrinolytic agent, effectively treats melasma by inhibiting melanogenesis and reducing inflammation. Intradermal TXA injections provide targeted delivery, offering the potential for improved outcomes with minimal systemic side effects. This study aims to evaluate the efficacy of intradermal TXA at two concentrations (4 mg/ml and 40 mg/ml) compared to a control in treating mild to severe melasma.

Materials & Methods: This 16-week randomized, double-blind, split-face study included thirty participants who were randomly assigned to receive intradermal TXA injections (4 mg/ml or 40 mg/ml) on one side of their face and normal saline solution on the other. Treatments were administered every two weeks for a total of five sessions. All participants were instructed to apply 3% kojic acid cream twice daily throughout the study. Outcome measures, including photography, the Modified Melasma Area and Severity Index (mMASI), melanin index, skin brightness, pain score, and participant satisfaction, were assessed at baseline, during each treatment session, and at four-week intervals through week 16.

Results: The TXA 4 mg/ml group showed a significant reduction in mMASI beginning at week 2 compared to baseline, and at week 4 compared to the control group. The most considerable reduction occurred during the final treatment session (week 8), with a mean percentage improvement of 43.47% (95% CI: 37.07–49.88, $p < 0.001$). In contrast, both the TXA 40 mg/ml group and the control group exhibited a significant reduction in mMASI starting at week 4 compared to baseline, without a statistically significant difference between the two groups. Skin brightness significantly increased from baseline starting at week 4 in all groups, with no statistically significant differences noted among them. Pain scores were similar across all groups: control 4.8 (4.2–5.4), TXA 4 mg/ml 4.9 (4.2–5.6), and TXA 40 mg/ml 4.7 (4.0–5.4). At week 8, satisfaction scores were highest in the 4 mg/ml group, followed by the 40 mg/ml group, with the control group scoring the lowest (8.4 [7.8–9.1]; 8.1 [7.4–8.7]; 7.6 [7.0–8.1]; $p = 0.002$ and 0.090, respectively). However, by the conclusion of the study, satisfaction scores did not differ significantly among the three groups.

Conclusion: The study's results indicate that 4 mg/ml intradermal TXA injections provide an effective and well-tolerated treatment for melasma. Although topical treatments also show efficacy in reducing melasma intensity with consistent long-term use, intradermal TXA injections are linked to quicker clinical improvement.

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Abstract N°: 838

Efficacy of Tinted versus Non-tinted Sunscreens with Similar Formulation and SPF in Reducing Sunlight-Induced Skin Damage in the Iranian Population with Skin Types II to IV

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Introduction & Objectives: Sun exposure exerts biological effects on the skin through ultraviolet (UV) rays and visible light. While non-tinted sunscreens only offer UV protection, tinted sunscreens protect against both UV and visible light. To our knowledge, differences in the efficacy of these sunscreens on skin biophysical characteristics have not previously been investigated with prospective, head-to-head, quantitative methodologies. We aimed to evaluate and compare the qualities of two sunscreens, tinted and non-tinted, with the same formulation and sun protection factor (SPF), using biophysical parameters in the Iranian population with skin types II to IV.

Materials & Methods: In this assessor-blind, randomized phase III clinical trial, we enrolled 71 healthy individuals into two groups. One group received tinted sunscreen (tinted rejuvenating sunscreen cream with SPF 50 containing UVA and UVB filters, vitamin A, and grapevine shoot extract); the second group received non-tinted sunscreen (colorless rejuvenating sunscreen cream with SPF 50 containing UVA and UVB filters, vitamin A, and grapevine shoot extract) applied four times daily (every three hours, from 8 AM to 8 PM) for eight weeks. The study duration was set at eight weeks with follow-up sessions at baseline, week 4, and week 8. The biophysical parameters, including hydration, sebum, pH, trans-epidermal water loss (TEWL), melanin, erythema, friction, elasticity, erythema change severity, and skin lightness, plus participant satisfaction were measured. The percentage changes of the variables were compared with the independent samples t-test between the two groups.

Results: Following four weeks, no significant difference in any skin biophysical parameter was observed between the two groups. After 8 weeks, the reduction percentage of TEWL (p-value: 0.043) and erythema (p-value: 0.025) and the increase in skin lightness (p-value: 0.033) and R5 (skin elasticity) (p-value: 0.048) were higher in the tinted group, while the percentage of hydration increase was higher in the non-tinted group (p-value: 0.037).

Conclusion: Taken together, our study indicated that tinted sunscreen played an effective role in improving a greater number of biophysical parameters including TEWL, erythema, R5, and skin lightness compared with the non-tinted sunscreen, while the only parameter with better outcomes in the non-tinted sunscreen group was the hydration. Larger clinical trials with longer follow-up periods are required to examine the effects of tinted and non-tinted sunscreen products on the biophysical properties of the skin.

Abstract N°: 865

Care habits of patients with rosacea.

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Introduction & Objectives:

Rosacea is a facial inflammatory dermatosis that negatively impacts the patient's quality of life. Discomfort associated with an aesthetic defect is not always a reason to seek qualified medical help. It is also facilitated by life in conditions of the war in Ukraine, a decrease in the solvency of the population. Self-diagnosis, self-medication, and "treatment" in a beauty salon only worsen the course of the disease. In recent years, there has been a negative trend - patients with rosacea do not know how to care for their skin and do not consider aesthetic defects a dermatological problem, as a result, their visit to a dermatologist is postponed for a long time. Moreover, many patients, even after completing the treatment of an active episode of rosacea and receiving treatment recommendations, return to their old habits in basic facial skin care.

Objective. To determine the care habits of patients with rosacea during exacerbation and remission.

Materials & Methods:

One hundred two patients, aged 28–42 years, with rosacea phenotype I and II of both sexes, with an experience of the disease from 0 to 10 years, underwent a questionnaire during a visit to a dermato-cosmetology institution. We assessed demographic and socioeconomic indicators, skin care habits, and facial skin care features during the exacerbation and interrelapse periods.

Results:

Among the respondents, the proportion of women was 66.7%. Persons without professional or higher education – 56.9%. Those living in rural areas – 28.4%. 73.5% of respondents have a low level of well-being.

83.3% know that insolation is an important trigger and can provoke exacerbation and worsen the course of rosacea. However, only 17.7% of the survey participants avoid being outside during peak solar activity and use sunscreen every 2–3 hours. The reasons for not using SPF products in 24.5% of cases were noted by respondents as their high cost, in 40.2% - a lack of understanding of their effectiveness. Following the recommendations and using appropriate cosmeceutical care products with active rosacea therapy during the exacerbation is mandatory for 85.3% of respondents. Nevertheless, 11.8% of patients believe this is not a necessary step in remission.

Concerning moisturizing and cosmeceutical creams with active ingredients for skin barrier and hydration restoration, strengthening blood vessels, and reducing skin reactivity daily apply only 26.5%.

Between relapses, 12.8% of respondents continue to visit a beautician, receiving procedures that stimulate blood circulation: acid peels, warming masks, and massage with fatty cream. 2.9% visit saunas or take hot baths, and 18.6% actively use decorative cosmetics.

Conclusion:

Despite the high awareness of rosacea patients about the course of rosacea and the role of trigger factors, the need for basic skin care understanding remains insufficient. The low level of well-being and education is perhaps the main reason for failure to follow doctor's recommendations, and abuse of cheap services of a cosmetologist-aesthetician. Minimizing the impact of provoking environmental factors, basic care for facial skin with rosacea, which involves strengthening blood

vessels and maintaining the skin barrier function during active therapy and in the interrelapse period, is the basis of this dermatosis management. Therefore, conversing with patients to increase their knowledge about preventing facial skin inflammation is essential in managing rosacea.

Abstract N°: 901

Efficacy of Stromal Vascular Fraction Versus Topical Minoxidil in Treatment of Androgenetic Alopecia: A Randomized Study

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Introduction & Objectives:

The utilization of adipose tissue and Adipose tissue derived stem cells (ADSCs) in regenerative medicine is becoming more common in all sectors of medicine. The aim of this study was to determine the difference in the efficacy of SVF versus topical minoxidil in treatment of androgenetic alopecia and to compare the patient satisfaction by each treatment.

Materials & Methods:

This randomized study was carried out on 70 patients (33 male and 37 female) aged from 18 to 45 years old with all grades of androgenetic alopecia according to basic and specific classification (BASP).Patients were randomly allocated into two equal groups: Group A were injected with single session of SVF, and group B were treated with topical minoxidil spray 5% twice daily for men and 2%minoxidil for women for 6 months.

SVF preparation was done using Coleman's technique (2006) was used for fat grafting, First, Klein's,(1996) Full evaluation was done at the 6-month follow-up visit. All patients were assessed by digital and trichoscopic examination of the scalp (using Dlite STR CA_USA)

Results:

Regarding group (A), there was highly significant improvements at 6 months compared to baseline regarding hair shaft density, diameter and the T/V hair ratio (P <0.001).These findings highlight the efficacy of the SVF treatment in improving both objective hair parameters .Regarding group (B) there was highly significant improvements at 6 months compared to baseline regarding hair shaft density ,diameter and the T/V hair ratio (P <0.001).

Regarding patient satisfaction , there was statistically significant difference in patient satisfaction (p = 0.011) between both groups, SVF may offer a more satisfactory treatment experience but there was no significant improvement in hair shaft diameter, hair shaft density, T/V hair ratio between both groups.** Correlation of gender and hair shaft diameter, density and terminal/vellus ratio at baseline in both groups revealed that at baseline regarding SVF group ,there was statistically significant positive correlation between hair density and hair shaft diameter (ρ=0.351,p=0.045). strong positive correlation was found between hair shaft diameter and the terminal-to-Vellus hair ratio (ρ=0.693,p=0.004)..For topical minoxidil group,statistically significant positive correlation was observed between hair density and hair shaft diameter (ρ=0.552,p=0.001).A significant positive correlation was found between hair shaft diameter and the terminal-to-Vellus hair ratio (ρ=0.641,p=0.010). Regarding** SVF treatment at 6 months there was a significant positive correlation (tau_b = 0.377, p = 0.033) between hair shaft diameter and patient satisfaction, highlighting that improved hair thickness is a key driver of patient-reported outcomes.

Conclusion:

The study indicates that while both the SVF and Minoxidil treatments led to significant improvements in patient satisfaction over 6 months, there were no substantial differences between the two treatment groups regarding hair characteristics.The finding in group (A) that hair density shows only a weak, non-significant correlation with hair shaft

diameter (tau_b = 0.272, p = 0.088) , suggesting that SVF may primarily enhance hair quality (thickness) rather than quantity (density) propably due to the fact that SVF create new follicles and not working on the same follices like minoxidil.

Overall, both treatments appear to be beneficial, but individual responses may vary.

Abstract N°: 988

Objective Definition of Healthy Skin: a Systematic Review

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Introduction & Objectives:

Objective measures for human skin health and quality are not well validated. Having an objective measure of healthy skin would be valuable for for developing healthy skin interventions and may be feasible using artificial intelligence (AI). As a first step to developing such a tool, we performed a systematic review to assess what parameters and measurement tools have been used to define and assess “healthy skin.”

Materials & Methods:

The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) were used to guide methodology and reporting. A comprehensive literature search was performed using the databases Pubmed, Embase, Science Direct, Ovid Medline, and Web of Science in December 2024 using keywords: (“dermatology” OR “dermatologist”) AND (“classification” OR “guideline” OR “parameter” OR “metric”) AND “skin.” Original studies screened were in English and published in dermatology journals from 2014-2024 if they described metrics by which human skin health could be assessed. No geographic restrictions were used. 5466 records were screened by three independent researchers. 81 records were screened for full text eligibility, with nine included in the final review. Discrepancies were settled by a fourth independent researcher.

Results:

Nine sources described eleven parameters used to assess skin health. Five-point photonumeric scales can be used to assess pore size, skin roughness/texture, elasticity, wrinkles, pigmentation, and erythema. Hyperspectral Imaging (HSI) and TM300 measures erythema and total epidermal water loss, respectively. Other parameters of skin health are excessive oiliness vs dryness, skin firmness, skin color evenness, and skin moisture content.

Conclusion:

AI can assist researchers and marketers to recognize diseased versus healthy human skin. This technology can be useful for the devlopemnt of new treatments and to follow the course of treatment over time. Validating such tools may empower consumers to chose and directly obtain appropriate treatments for their individual needs.

Abstract N°: 1168

Evaluation of the efficacy, safety, and satisfaction rate of topical latanoprost in patients with hypopigmented burn scars treated with fractional CO2 laser: a double-blind randomized controlled clinical trial

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Introduction & Objectives:

Burn scars present psychological and social challenges for patients, classified into atrophic and hypertrophic types. Treatments like corticosteroid injections, laser therapy, and platelet-rich plasma (PRP) injections are commonly recommended for hypertrophic scars, while regenerative medicine and fractional CO2 lasers are linked to some degree of improvement for atrophic scars. Hypopigmented and depigmented burn scars pose ongoing challenges for healthcare providers and patients, with therapies such as intense pulsed light and fractional CO2 laser showing variable effects in treating these conditions.

Materials & Methods:

This study evaluates the effectiveness of latanoprost, a prostaglandin analog, in combination with fractional CO2 laser for repigmentation of hypopigmented burn scar lesions. During the study, patients were treated with 0.005% latanoprost eye drop or normal saline twice a day for 6 months and underwent six monthly fractional CO2 laser sessions. Treatment instructions were provided by the physician, and patients were instructed to report any complications and avoid using other medications in the treatment area. Assessments included photography at the start of the study and in three follow-up sessions at three-month intervals. Improvement was assessed using the Subject Global Aesthetic Improvement Scale (SGAIS) by both the physician and patients. Patient satisfaction was evaluated using a Grade scale, and side effects were monitored in all follow-up sessions.

Results:

In the third follow-up session, physicians assessing the Subject Global Aesthetic Improvement Scale (SGAIS) observed that a higher proportion (85.7%) of cases in the fractional CO2 laser with latanoprost group achieved a grade of 4 (50-74% improvement). In the placebo group, 0% of patients achieved grade 4, and 71.4% were classified as grade 2 (0-24% improvement), indicating a significant difference (P-value: 0.0001). Patient satisfaction, measured by the “Grade scale to evaluate patient satisfaction” index, revealed a notable contrast between the two groups, with average satisfaction scores of 8.50 ± 0.65 and 4.64 ± 1.00 for the fractional CO2 laser with latanoprost and placebo groups, respectively, indicating a statistically significant difference (P = 0.0001). Furthermore, throughout the study, no severe side effects were reported by any of the patients.

Conclusion:

Prostaglandin analogs, particularly latanoprost, have proven to be effective in promoting repigmentation of hypopigmented and depigmented burn scar lesions. When this topical medication is combined with fractional CO2 laser treatment, it enhances the laser’s efficacy and overall effectiveness in treating the lesions. This combination is crucial for improving hypopigmented scar treatment by enhancing both the laser’s effectiveness in scar improvement and the delivery of latanoprost through the laser.

EADV SYMPOSIUM PRAGUE 22-24 MAY 2025

Abstract N°: 1207

Comparative Efficacy of Diode (810nm) Laser Hair Reduction in patients of facial Hirsutism with PCOS versus idiopathic hirsutism

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Introduction & Objectives: Hirsutism refers to the presence of terminal hair in a male-pattern distribution in women, most commonly due to polycystic ovary syndrome (PCOS) or idiopathic causes. Laser hair reduction (LHR) using a Diode laser(810nm) is an effective long-term method, but its comparative efficacy in patients with PCOS or idiopathic hirsutism remains variable and unclear. In this study, we aimed to assess the efficacy of diode laser hair reduction in hirsutism, with or without PCOS.

Materials & Methods: A retrospective case-control study was performed on patients diagnosed with hirsutism, categorized into two groups: PCOS-related hirsutism and idiopathic hirsutism. Baseline clinical data, including skin type, hair removal methods, and removal frequency recorded in clinical files, were extracted. Evaluation of hirsutism done at baseline using the Ferriman-Gallwey (FG) score was also recorded. A relevant hormonal profile pertaining to PCOS was done at baseline. Patients underwent diode LHR sessions over the face and neck at standardized intervals (4 weeks). Laser treatment was done using variable fluence (20-26 J/cm^2) and pulse duration (70–100 ms) based on skin type, patient tolerance, and minimal erythema, avoiding burns. Hair reduction was assessed using the patient-reported shaving frequency, hair-free interval, and percentage hair clearance at baseline, 3 months, and 6 months.

Results: Forty-six patients with Fitzpatrick skin types III-IV were retrospectively recruited based on complete availability of data, with 23 patients in each group. Both groups were comparable in terms of age, hair removal methods, and hair removal frequency. The mean(SD) FG score at baseline was significantly higher in the PCOS group [20.83(3.77)] vs the idiopathic group[15.29(4.29)] (p=0.002). The mean (SD) levels of serum-free testosterone [1.349(0.66) ng/dL vs. 0.66(0.35) ng/dL; p=0.007] and dehydroepiandrosterone sulfate (DHEAS) [276.81(36.12) vs. 172.34(79.55) mg/dL; p=0.002] in PCOS vs. idiopathic hirsutism groups respectively.

The PCOS group showed a relatively slower response, with a mean (SD) percentage hair clearance of 18.12(5.67)% at 3 months and 29.57(9.41)% at 6 months, compared to 37.61(11.74)% at 3 months and 64.35(17.3)% at 6 months, in the idiopathic hirsutism group (**p=0.005 at 3 months;p= 0.001 at 6 months**). The mean (SD) hair-free interval in the PCOS group at 6 months follow-up was 2.09 (0.84)weeks vs 3.52 (0.72) weeks in patients with normal hormonal profiles (p=0.008). Shaving frequency also decreased significantly in both groups at six months follow-up, though patients with idiopathic hirsutism exhibited a more pronounced reduction (**p =0.015**).

Conclusion: Patients with idiopathic hirsutism demonstrated faster hair clearance, a longer hair-free interval, and a more pronounced reduction in shaving frequency compared to those with PCOS. These findings highlight the need for individualized treatment approaches to optimize outcomes in PCOS-related hirsutism.

Abstract N°: 1221

The efficacy, satisfaction, and safety of carbon dioxide (CO2) fractional laser in combination with pulsed dye laser (PDL) versus each one alone in the treatment of hypertrophic burn scars: a single-blinded randomized controlled trial

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Introduction & Objectives:

Minimally invasive laser-based methods have gained attention for improving burn scars. This study aimed to evaluate the efficacy of two laser techniques—pulsed dye laser (PDL) and ablative fractional CO2 laser (AFCL)—and their combination on hypertrophic and keloid scars.

Materials & Methods:

A randomized single-blinded clinical trial was conducted on patients with hypertrophic or keloid burn scars. Participants were randomly assigned to three groups: PDL alone, AFCL alone, or a combination of PDL and AFCL. Assessments were conducted before treatment and 40 days post-final session, utilizing the Vancouver Scar Scale (VSS) to measure improvements in scar characteristics, including color, vascularity, height, and pliability.

Results:

Significant improvements were observed in all groups based on the VSS scores, scar color, vascular bed, height, and pliability. Notably, the combination therapy group demonstrated the most pronounced improvements, particularly in vascularity and pliability. Although the differences between groups were not statistically significant, the combined treatment showed a high percentage of improvement in total VSS and its indicators. Variations in efficacy were noted between mature and immature scars; the combination treatment was particularly effective in enhancing pliability, vascularity, and color in the immature scar subgroup.

Conclusion:

Combined treatment using PDL and AFCL may offer more significant improvements in the appearance and pathological characteristics of burn scars compared to each treatment alone, particularly for immature scars. The findings suggest potential clinical significance, highlighting the benefits of combination therapy in scar management.

Abstract N°: 1222

Evaluation of the efficacy, safety and satisfaction rates of platelet-rich plasma, non-cross-linked hyaluronic acid and the combination of platelet-rich plasma and non-cross-linked hyaluronic acid in patients with burn scars treated with fractional CO2 laser: A randomized controlled clinical trial

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Introduction & Objectives:

Skin scarring from burns, injuries, stretch marks, and acne can lead to cosmetic and functional issues. Various treatments are available, including lasers, corticosteroid injections, surgery, and regenerative techniques such as platelet-rich plasma (PRP) and hyaluronic acid products. This study aims to evaluate the effectiveness of PRP, non-cross-linked hyaluronic acid, and their combination in improving burn scars, as well as their impact on quality of life and potential disabilities.

Materials & Methods:

A clinical trial was conducted with 10 individuals suffering from burn scars between 2022 and 2023. Participants underwent CO2 fractional laser treatment followed by injections of PRP, non-cross-linked hyaluronic acid, or a placebo in the scar areas. The treatment was performed over two sessions with a one-month interval. Evaluations included the Vancouver Scar Scale (VSS), biometric assessments (tewametry, corneometry, erythema index, melanin index, cutometry, thickness, and density), ultrasounds, and satisfaction ratings. Assessments were conducted at baseline, one month post-first session, and three months post-first session.

Results:

Significant improvements in biometric parameters were observed in the intervention groups compared to the placebo group ($p < 0.05$). Both PRP and non-cross-linked hyaluronic acid treatments, as well as their combination, demonstrated the best clinical responses, with significant differences noted among groups ($p < 0.05$). Dermal thickness did not show significant improvement across treatment sessions, and variations among subjects were not significantly different. Colorimetry significantly improved in all groups except the placebo group, with no notable differences between intervention groups. The VSS significantly decreased in all treatment groups compared to the placebo.

Conclusion:

PRP, non-cross-linked hyaluronic acid, and especially their combination are effective treatments for burn scars, demonstrating significant improvements in clinical outcomes and patient satisfaction. These findings support the use of these treatments in clinical practice to enhance scar appearance and potentially improve quality of life for affected individuals.

Abstract N°: 1235

Evaluation of the Efficacy, Safety, and Satisfaction Rates of Platelet-Rich Plasma, Non-Cross-Linked Hyaluronic Acid, and their Combination in Patients with Acne Scars Treated with Fractional CO2 Laser: A Randomized, Double-Blind, Split-Face Comparative Study

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Introduction & Objectives:

Acne scars, particularly atrophic scars, significantly impact patients' quality of life. Effective treatments include fractional CO2 laser, subcision, and regenerative therapies like platelet-rich plasma (PRP) and non-cross-linked hyaluronic acid (HA). This study aims to evaluate the efficacy, safety, and satisfaction rates of PRP, non-cross-linked HA, and their combination in treating acne scars following fractional CO2 laser therapy.

Materials & Methods:

A randomized, double-blind, split-face clinical trial was conducted between 2023 and 2024 involving 15 patients, aged 18 to 65, with atrophic acne scars. Participants were assigned to three groups: one group received a combination of PRP and HA on one side of the face while the other side received either PRP alone, HA alone, or normal saline as a placebo. The study involved two treatment sessions, with evaluations conducted at baseline, one month after the first session, and three months post-treatment using biometric and ultrasound measurements.

Results:

No significant differences were observed in colorimetry, tewametry, and corneometry among groups. However, the PRP group exhibited higher erythema and melanin indices compared to the PRP + HA group. The non-cross-linked HA group demonstrated superior tewametry scores and higher patient satisfaction rates. Overall, the combination treatment of PRP and HA led to greater patient and physician satisfaction compared to the treatments administered alone.

Conclusion:

The combination of platelet-rich plasma and non-cross-linked hyaluronic acid presents a promising approach for the treatment of atrophic acne scars, demonstrating enhanced satisfaction rates and biometric improvements over individual treatments. Further studies are warranted to solidify these findings and refine treatment protocols.

Abstract N°: 1272

Evaluating the Combination and Comparison of Ablative Fractional Lasers (CO2, Erbium-YAG) with Pulsed Dye Laser (PDL) for Treating Hypertrophic Scars and Keloids: A Systematic Review

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Introduction & Objectives:

The aim of this study is to compare pulsed dye laser (PDL) and ablative fractional lasers (CO2, Erbium-Yag) in the treatment of hypertrophic and keloidal scars in a systematic review.

Materials & Methods:

Databases including Web of Science, Science Direct, Google Scholar and PubMed were searched for clinical trials up to December 1, 2022; focusing on the role of ablative fractional lasers and pulsed dye lasers in treating hypertrophic and keloidal scars, using comprehensive keywords and search syntaxes. Key data extracted included type of scars, the assessment indexes, treatment modalities, side effects and the final conclusion of each article.

Results:

We** didn’t** found any significant difference between the PDL and ablative fractional laser in the treatment of hypertrophic and keloidal scars, and both showed significant improvement. The average number of treatment sessions in the group receiving ablative fractional laser was 3.43 sessions, in the group receiving PDL, 3.68 sessions, and in the group receiving the combination of the two lasers, 1.5 sessions. Ablative fractional laser was 57.5% effective in VSS scoring and 40.4% effective in POSAS scoring, while PDL laser was 49.4% effective in VSS scoring and 35.5% effective in POSAS scoring , also the combination of both methods may lead to better results and higher efficacy with no severe adverse reactions noted.

Conclusion:

Ablative fractional laser and PDL are both effective in treating hypertrophic and keloid scars and there was no significant difference between them. Although, Studies investigating the combination of these two lasers have reported greater effectiveness than each method alone.

Abstract N°: 1294

A study reveals the reduction of wrinkles and expression lines with new combinacion of natural and effective ingredients retinol like

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[1]ADCOS group, Brazil

Introduction & Objectives: The eye area is one of the most delicate regions of the face. Its a sensible and thinner, has lower moisture retention, and contains fewer fibroblasts, making it more vulnerable to aging products. Additionally, constant blinking and facial expressions accelerate collagen degradation, contributing to the formation of wrinkles and fine lines.

Bakuchiol, is a natural alternative to retinoids, and cranberry biopeptides offer retinol-like option with benefits without undesirable effects such as itching, redness, or dryness. Ashwagandha (Indian ginseng) provides adaptogenic properties, helping to preserve fibroblast activity while delivering potent antioxidant action. Multimolecular hyaluronic acid penetrates various skin layers, enhancing hydration and reinforcing the skin barrier.

These combination ingredients have been evaluated in clinical trials in their effects on the eye area as well as their safety profiles. The aim of this study was to assess the clinical efficacy of a stick formulation containing bakuchiol, cranberry biopeptides, ashwagandha, and hyaluronic acid in both preventing and reversing signs of aging for these sensitivity and fragile and delicate area of face.

Materials & Methods: The clinical evaluations were conducted with 32 volunteers, with an average age of 52 ± 8 years, Fitzpatrick skin types II to IV, and self-reported sensitive skin. The volunteers applied the studied formula containing bakuchiol, cranberry biopeptides, ashwagandha, and hyaluronic acid for 60 days. A 3D facial photography system was used to assess the reduction of wrinkles and expression lines around the eyes before and after 30 and 60 days of daily use of the study formula. Additionally, an ophthalmological acceptability study of the product was conducted to ensure its safety for use in the eye area.

Results: Clinical studies showed that the product prevented and reversed signs of aging in the eye area, including a statistically significant reduction ($P<0.05$) in the intensity of wrinkles and expression lines by up to 16.8%. None of the volunteers experienced skin sensitization or any adverse effects with the use of the studied formula.

Conclusion: These results demonstrate that the combination of bakuchiol, cranberry biopeptides, ashwagandha, and hyaluronic acid improves the signs of aging in the eye area, reducing wrinkles and expression lines without adverse effects, even on sensitive skin. This study highlights the benefits of combining traditional actives with bakuchiol and adaptogens to treat the delicate eye area.

Abstract N°: 1310

Advanced Photoprotection Solution: Development of a Sunscreen with SPF 99 that Preserves DNA and Combats Signs of Aging with P53 studie

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Introduction and Objectives: UV radiation causes sunburn, cellular damage, photoaging, and increases the risk of skin cancer. Among the biological effects, DNA damage is one of the most severe, as it can induce mutations and activate cellular defense mechanisms, such as the p53 gene, known as the 'guardian of the genome.' The development of a sunscreen with SPF 99, classified by ANVISA as maximum protection, is a challenge for R&D formulators. In addition to offering high protection against UV radiation, the product must ensure comfort, lightness, and high acceptance. This study aimed to formulate a facial sunscreen with SPF 99, providing not only effective protection against UV radiation but also helping preserve cellular DNA, preventing photoaging, and contributing to skin health through the p53 marker.

Materials and Methods: The product underwent SPF (ISO 24444), UVA (ISO 24443), photostability, phototoxicity, safety, and visible light protection tests. An ex vivo study analyzed human skin fragments to quantify P53 protein using ELISA. Fragments were incubated in cell culture medium and irradiated with UV light at a dose of 15 J/cm2 for four days. Treated fragments were irradiated on the first day and evaluated for the next three days at 25-30 mg/cm2. Basal control group fragments were kept in similar culture conditions. Additionally, 32 volunteers (phototypes II to IV) assessed sensory perception after 28 days of use.

Results: According to ISO 24444:2019, the product presented an SPF of 107.3, after 40 minutes of water immersion, SPF 60.1, and water resistance of 54.3%. According to ISO 24443:2012, UVA-PF was 60.1, with a critical wavelength of 380.0 nm. No skin reactions occurred after primary dermal photoirritation and photosensitization induction. No primary or cumulative dermal irritation or dermal sensitization was observed. The product retained 84.8% of its initial SPF after irradiation, demonstrating photostability. Visible light was blocked by 57%. UV exposure increased p53 synthesis by 413.82% ($P<0.01$), while the SPF 99 product reduced p53 production by 80.78% ($P<0.01$), confirming its protective effect on DNA, prevention of photoaging, and minimization of actinic damage. The sensory perception study showed good acceptability with pleasant texture, easy spreadability, and an imperceptible finish.

Conclusion: The SPF 99 sunscreen demonstrated high efficacy against UV radiation, water resistance, and visible light blocking. Its protective effect was confirmed by the reduction of p53 expression, indicating preservation of DNA and prevention of photoaging. The excellent sensory acceptance makes it suitable for daily use, ensuring high consumer adherence. These results highlight the innovation of the formula, combining maximum protection with a pleasant sensory experience, contributing to skin health.

Abstract N°: 1466

Combined application of microneedle radiofrequency and fractional laser therapy in the correction of age-related skin changes.

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Introduction & Objectives: Currently, methods that stimulate the body's own regenerative mechanisms are actively used to correct age-related skin changes. Reparative regeneration ends with the clinical picture of skin rejuvenation. However, due to concerns about healing time and the possibility of serious complications such as scarring and pigmentation disorders, alternative, less invasive approaches have been developed. Mechanical "fractional" stimulation of the dermis - microneedling - involves the use of micro-needles to percutaneously induce collagen synthesis. Each individual micro-damage is perceived by the skin as an injury, but since the damage to the epidermis is minor, its barrier function is quickly restored. Bipolar radiofrequency devices have all theoretical prerequisites for use in combination, there are data on combination with phototechnologies, and the properties of electro-optical synergy are manifested.

Materials & Methods: To study the comparative efficacy of microneedling monotherapy and its combination with fractional laser rejuvenation in the correction of involutional skin changes.

Results: Thirty-eight female patients with signs of skin aging aged 30 to 70 years were under observation. Depending on the method of correction, the patients were divided into 2 groups: Group 1 - monotherapy in the form of microneedling, Group 2 - combined therapy: microneedling and fractional laser exposure with a wavelength of 1927nm, in both cases the frequency of the procedure once every 4 weeks. To study the effectiveness of aesthetic correction we used computerized 3D diagnostics of facial skin condition, cutometry, high-frequency ultrasound diagnostics of skin at 33MHz and 75MHz frequencies. Measurements were performed before and 4 weeks after the first procedure. In 1 month after the procedure in the 2nd group of patients there was a positive dynamics in terms of skin computer diagnostics indicators: skin texture and smoothness improved by 35%, wrinkles smoothed out by 30%, skin moisture increased by 28%, pigmentation index decreased by 20%, compared to the group that received monotherapy. In group 1, the elasticity index increased by 24%, in group 2 - by 30%. Epidermis thickness increased by 8% on average, dermis thickness by 15%, acoustic density of skin layers by 18%, epidermis microrelief decreased by 35% in patients who received complex therapy, which on average is 20% higher than after the procedure of only micro-needle RF-lifting in group 1.

Conclusion: Combined application of micro-needle radiofrequency therapy and fractional laser with a wavelength of 1927nm contributes to a reliable increase in skin moisturization and elasticity, reduces the severity of wrinkles and folds on the face, as well as pigmentation disorders, which is the basis of a high clinical effect in age-related skin changes and is confirmed by the data of high-frequency ultrasound scanning.

Abstract N°: 1574

Comparative Analysis of Platelet-Rich Plasma (PRP) and Platelet-Rich Fibrin (PRF) in Aesthetic Dermatology: Safety, Efficacy, and Regulatory Considerations in the EU

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Introduction & Objectives: Platelet-rich plasma (PRP) and platelet-rich fibrin (PRF) are widely utilized in regenerative and aesthetic dermatology, offering benefits in skin rejuvenation, scar management, and hair restoration. PRP, extensively studied, has shown significant regenerative potential, while PRF, a second-generation platelet concentrate, facilitates sustained growth factor release without anticoagulants, potentially enhancing safety and efficacy. This review compares PRP and PRF in terms of safety, efficacy, clinical applications, and regulatory frameworks in the EU/UK.

Materials & Methods: A systematic literature review was conducted across PubMed, EMBASE, and Cochrane Library databases (2010-2024). Inclusion criteria encompassed randomized controlled trials (RCTs), cohort studies, and case series comparing PRP and PRF in aesthetic dermatology. Data extracted included clinical efficacy, patient-reported satisfaction, histological analyses, and adverse event profiles. Regulatory insights were obtained from the European Medicines Agency (EMA), the UK Medicines and Healthcare products Regulatory Agency (MHRA), and CE marking directives.

Results: A total of 42 studies involving 1,358 patients met the inclusion criteria. PRF demonstrated comparable or superior efficacy to PRP in improving skin texture, elasticity, and reducing fine lines and post-procedural recovery times. PRF's fibrin matrix promotes sustained release of transforming growth factor-beta (TGF-β), platelet-derived growth factor (PDGF), and vascular endothelial growth factor (VEGF), contributing to enhanced tissue regeneration. In microneedling adjunct treatments, PRF improved skin elasticity scores by 25% more than PRP ($p<0.05$). Both modalities had minimal adverse effects, with PRF exhibiting a lower incidence of prolonged inflammation due to the absence of anticoagulants.

Regulatory assessments indicate that PRP benefits from broad CE-marked clinical approval under the EU Medical Device Regulation (MDR 2017/745) and MHRA conformity assessments in the UK. PRF, however, lacks uniform classification and is often categorized under autologous tissue regulations, limiting standardization and broader clinical adoption.

Conclusion: PRF offers notable advantages over PRP, including simplified preparation, absence of additives, and prolonged biological activity. However, inconsistencies in PRF preparation techniques and lack of standardized protocols challenge direct comparisons. Regulatory discrepancies further complicate PRF's clinical integration, highlighting the need for harmonized guidelines to balance safety with efficacy.

Both PRP and PRF are effective regenerative therapies in aesthetic dermatology. PRF presents a favourable safety and efficacy profile, particularly for sustained tissue regeneration. Addressing regulatory inconsistencies and establishing standardized preparation protocols are essential to optimizing patient outcomes and ensuring consistency in clinical practice across the EU.

Abstract N°: 1577

The Role of the Skin Microbiome in Addressing Anti-Aging and Pigmentation Concerns: A Systematic Review of Evidence, Efficacy, and Safety in Aesthetic Dermatology

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Introduction & Objectives:

The skin microbiome, a complex network of bacteria, fungi, and viruses, plays a fundamental role in skin health. Beyond its protective and immune-modulating functions, recent research suggests its influence on aesthetic outcomes, particularly in skin aging and pigmentation disorders. Dysbiosis, or microbial imbalance, has been associated with increased oxidative stress, chronic inflammation, and impaired skin barrier function, potentially accelerating aging and uneven pigmentation. This systematic review evaluates the role of the skin microbiome in anti-aging and pigmentation treatments, assessing efficacy, safety, and integration into aesthetic dermatology.

Materials & Methods:

A systematic literature search was conducted across PubMed, EMBASE, and Cochrane Library databases for studies published between 2010 and 2024. Inclusion criteria encompassed randomized controlled trials (RCTs), cohort studies, and case series evaluating microbiome-targeted interventions, such as probiotics, prebiotics, and postbiotics, in aesthetic dermatology. Exclusion criteria included non-English studies, articles lacking primary data, and research focused exclusively on pathological skin conditions. Data extraction included clinical efficacy metrics, patient-reported outcomes, histological findings, and microbiome composition changes pre- and post-intervention.

Results:

A total of 40 studies involving 1,312 participants met the inclusion criteria. Findings suggest that a balanced skin microbiome correlates with improved elasticity, reduced wrinkle formation, and enhanced post-procedural recovery:

- **Anti-Aging Interventions:** Patients undergoing microneedling, laser therapy, and topical retinoid treatments experienced up to a **40% acceleration in collagen remodeling** and a **25% reduction in fine lines** when microbiome-modulating therapies were included ($p<0.05$).
- **Pigmentation Disorders:** Probiotic and microbiome-enriched skincare formulations demonstrated **30% improvement in pigmentation scores**, particularly in melasma and post-inflammatory hyperpigmentation cases ($p<0.01$). Specific bacterial strains, including *Lactobacillus* and *Bifidobacterium*, were implicated in melanogenesis regulation.
- **Post-Procedure Recovery:** Microbiome modulation pre- and post-procedure resulted in **quicker recovery, reduced erythema, and lower post-inflammatory hyperpigmentation rates**, improving overall patient satisfaction.

Conclusion:

The emerging link between the skin microbiome and aesthetic outcomes presents new opportunities for personalized dermatology. Modulating microbial diversity could **optimize anti-aging and pigmentation treatments**, enhance procedural recovery, and reduce inflammation-associated skin damage. However, limitations such as variability in study methodologies and the lack of standardized clinical protocols necessitate further research and clinical validation.

The skin microbiome plays a significant role in aesthetic dermatology, influencing treatment efficacy and skin aging outcomes. Future research should focus on identifying optimal microbial strains, developing microbiome-targeted

cosmeceuticals, and evaluating long-term safety. Integrating microbiome assessments into aesthetic protocols may offer novel, patient-specific interventions to enhance skin health and rejuvenation.

Abstract N°: 1579

The Role of Senotherapeutics in Aesthetic Dermatology: A Novel Approach to Skin Aging – A Systematic Review

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Introduction & Objectives: Cellular senescence is a hallmark of skin aging, driven by the accumulation of senescent fibroblasts, chronic inflammation, and extracellular matrix degradation. Senotherapeutics—agents that selectively target and eliminate senescent cells—represent an emerging paradigm in regenerative dermatology, offering potential benefits in improving dermal thickness, enhancing collagen synthesis, and reducing skin inflammation. As interest in senolytics and senomorphics grows, a critical evaluation of their efficacy, safety, and regulatory landscape in aesthetic dermatology is warranted.

Materials & Methods: A systematic literature search was conducted across PubMed, EMBASE, and Cochrane Library databases for studies published between 2010 and 2024. Inclusion criteria encompassed randomized controlled trials (RCTs), cohort studies, and systematic reviews investigating the impact of senotherapeutics, including senolytics (fisetin, dasatinib, quercetin, rapamycin) and senomorphics (metformin, nicotinamide riboside), on skin rejuvenation. Exclusion criteria included non-English publications, studies lacking primary clinical data, and in vitro-only studies. Data extraction focused on histological evidence of collagen remodeling, clinical efficacy, adverse event profiles, and regulatory status within the EU.

Results:

A total of 45 studies involving 1,856 patients met the inclusion criteria. Findings indicate:

- **Senolytic agents** such as dasatinib and quercetin demonstrated a **28% reduction in senescent fibroblast burden**, leading to improved dermal elasticity and **wrinkle depth reduction (p<0.01).**
- **Senomorphics** like rapamycin enhanced mitochondrial function and **increased skin hydration by 22% over six months (p<0.05).**
- Adverse effects were **minimal**, with transient erythema and localized irritation reported in **6% of patients**.
- Regulatory assessments indicate that **senotherapeutics remain classified as investigational agents** in aesthetic medicine, with ongoing discussions about their integration into cosmeceutical formulations in the EU/UK.

Conclusion:

Senotherapeutics offer a novel approach to addressing intrinsic skin aging at the cellular level. Their ability to selectively eliminate senescent fibroblasts while modulating inflammatory pathways suggests a promising role in aesthetic dermatology. Despite encouraging preclinical and clinical data, variability in study designs, optimal dosing, and long-term safety concerns necessitate further controlled trials. Additionally, regulatory frameworks must evolve to accommodate the transition of these compounds from experimental treatments to standardized dermatological interventions.

This review highlights senotherapeutics as a **next-generation anti-aging strategy**, with the potential for **integration into personalized regenerative treatments**. Future research should focus on optimizing dosing regimens, assessing long-term outcomes, and clarifying regulatory pathways to facilitate safe and effective clinical application.

Abstract N°: 1581

Analysis of Platelet-Rich Plasma (PRP) and Platelet-Rich Fibrin (PRF) in Aesthetic Dermatology: Safety, Efficacy, and Regulatory Considerations in the EU/UK

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Introduction & Objectives: Platelet-rich plasma (PRP) and platelet-rich fibrin (PRF) are widely utilized in regenerative and aesthetic dermatology, offering benefits in skin rejuvenation, scar management, and hair restoration. PRP, extensively studied, has shown significant regenerative potential, while PRF, a second-generation platelet concentrate, facilitates sustained growth factor release without anticoagulants, potentially enhancing safety and efficacy. This review compares PRP and PRF in terms of safety, efficacy, clinical applications, and regulatory frameworks in the EU/UK.

Materials & Methods: A systematic literature review was conducted across PubMed, EMBASE, and Cochrane Library databases (2010-2024). Inclusion criteria encompassed randomized controlled trials (RCTs), cohort studies, and case series comparing PRP and PRF in aesthetic dermatology. Data extracted included clinical efficacy, patient-reported satisfaction, histological analyses, and adverse event profiles. Regulatory insights were obtained from the European Medicines Agency (EMA), the UK Medicines and Healthcare products Regulatory Agency (MHRA), and CE marking directives.

Results: A total of 42 studies involving 1,358 patients met the inclusion criteria. PRF demonstrated comparable or superior efficacy to PRP in improving skin texture, elasticity, and reducing fine lines and post-procedural recovery times. PRF's fibrin matrix promotes sustained release of transforming growth factor-beta (TGF-β), platelet-derived growth factor (PDGF), and vascular endothelial growth factor (VEGF), contributing to enhanced tissue regeneration. In microneedling adjunct treatments, PRF improved skin elasticity scores by 25% more than PRP ($p<0.05$). Both modalities had minimal adverse effects, with PRF exhibiting a lower incidence of prolonged inflammation due to the absence of anticoagulants.

Regulatory assessments indicate that PRP benefits from broad CE-marked clinical approval under the EU Medical Device Regulation (MDR 2017/745) and MHRA conformity assessments in the UK. PRF, however, lacks uniform classification and is often categorized under autologous tissue regulations, limiting standardization and broader clinical adoption.

Conclusion: PRF offers notable advantages over PRP, including simplified preparation, absence of additives, and prolonged biological activity. However, inconsistencies in PRF preparation techniques and lack of standardized protocols challenge direct comparisons. Regulatory discrepancies further complicate PRF's clinical integration, highlighting the need for harmonized guidelines to balance safety with efficacy.

Both PRP and PRF are effective regenerative therapies in aesthetic dermatology. PRF presents a favourable safety and efficacy profile, particularly for sustained tissue regeneration. Addressing regulatory inconsistencies and establishing standardized preparation protocols are essential to optimizing patient outcomes and ensuring consistency in clinical practice across the EU.

Abstract N°: 1582

Emerging Role of Exosome-Based Therapies in Skin Rejuvenation: A Systematic Review of Safety, Efficacy, and Regulatory Considerations in the EU/UK

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Introduction & Objectives: Exosomes, nano-sized extracellular vesicles, are emerging as transformative agents in regenerative and aesthetic dermatology. They facilitate intercellular communication by delivering bioactive molecules, including proteins, lipids, and nucleic acids, influencing skin rejuvenation, scar remodeling, and pigmentation disorders. Their ability to stimulate collagen synthesis, enhance elasticity, and promote tissue repair has positioned exosome-based therapies at the forefront of aesthetic innovation. This systematic review evaluates the safety, efficacy, and clinical applications of exosome therapies, comparing plant-derived, in vitro-derived, and adipose-derived exosomes. Regulatory frameworks in the EU/UK are also examined.

Materials & Methods: A systematic literature review was conducted across PubMed, EMBASE, and Cochrane Library databases for studies published between 2010 and 2024. Inclusion criteria encompassed randomized controlled trials (RCTs), cohort studies, and case series evaluating exosome-based therapies in skin rejuvenation, scar management, and hyperpigmentation. Data extraction focused on clinical efficacy, patient satisfaction, histological findings, and adverse events. Regulatory documents from the European Medicines Agency (EMA), UK Medicines and Healthcare products Regulatory Agency (MHRA), and CE marking directives were reviewed to assess compliance.

Results: A total of 38 studies involving 1,214 patients met the inclusion criteria. Exosome-based therapies demonstrated significant improvements in skin texture, elasticity, hydration, and reduction of fine lines and hyperpigmentation.

- **Adipose-Derived Exosomes:** Showed superior outcomes in dermal remodelling, with increased collagen density, fibroblast proliferation, and angiogenesis. Clinical improvements were notable in scar revision and skin laxity treatments. Adverse events were minimal, primarily transient erythema.
- **In Vitro-Derived Exosomes:** Demonstrated moderate efficacy, particularly when engineered to enhance specific growth factor profiles. Applications included skin brightening and wrinkle reduction, with favorable safety outcomes due to controlled production environments minimizing contamination risks.
- **Plant-Derived Exosomes:** Emerging data suggest potential in reducing oxidative stress and inflammation, supporting skin barrier function. Efficacy in collagen stimulation was less pronounced compared to human-derived exosomes. Safety profiles were favorable, with no reported immunogenic responses.

Conclusion: Exosome-based therapies represent an evolving frontier in aesthetic dermatology. Adipose-derived exosomes exhibit strong regenerative potential but face regulatory scrutiny under EU Medical Device Regulation (MDR 2017/745). In vitro-derived exosomes offer customization potential with controlled safety profiles, while plant-derived exosomes present as novel, low-risk options with emerging efficacy data. Standardization of manufacturing processes and regulatory harmonization are essential to ensure consistent clinical outcomes and broader adoption.

Exosome-based therapies hold promise offering varied efficacy and safety profiles depending on their origin. Refining regulatory frameworks and establishing standardized protocols will be crucial to ensuring patient safety and optimizing clinical efficacy within the EU.

Abstract N°: 1608

Combined use of Botulinum toxin A and Profhilo for upper face rejuvenation: A randomized clinical trial

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Introduction & Objectives: Hyaluronic acid (HA) and Botulinum toxin A treatments are highly regarded for their effectiveness in facial rejuvenation

Aim: To investigate the impact of adding Profhilo into BTX-A injection, versus using BTX-A alone for frontal skin rejuvenation.

Materials & Methods: In a prospective clinical trial, 10 subjects were treated by upper face Profhilo plus Botulinum toxin A injection and 10 age- and sex- matched controls received only Botulinum toxin A injection. Clinical and sonographic improvement were compared 3 months after last treatment session.

Results: A total of 20 participants (10 patients in each group) including 8 males (80%) and 2 females (20%) in case group and 7 males (70%) and 3 females (30%) in control group, were enrolled in the study. According to Merz scores before and 3 months after treatment, the wrinkles were dramatically reduced in both groups, with treatment results were not significantly different between two groups. None of sonographic variables including dermis and hypodermis thickness and elasticity, significantly changed after treatment with BTX-A alone or with Profhilo injection.

Conclusion: We have shown that adding Profhilo to BTX-A injection has not any short-term clinical or sonographic advantage in frontal area wrinkle reduction.

Abstract N°: 1709

Effects of Cooling on Nd:YAG Laser Treatment of Palmoplantar Warts: A Prospective Cohort Study

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Introduction & Objectives:

Verrucae (warts) are benign proliferations of keratinocytes in the skin, secondary to infection with the human papillomavirus (HPV). Lasers have recently become a promising and increasingly common treatment option for warts. Nd:YAG lasers are relatively new in the treatment of warts. Nd:YAG lasers act on warts by causing thrombosis in congested vessels within the wart structure, directly destroying the virus through thermal damage, and inducing necrosis of the infected keratinocytes. However, it is not yet known whether the cooling systems commonly used in laser treatments interfere with the treatment by causing vasoconstriction in the dilated and congested vessels of the wart. In this study, we aimed to determine whether the cooling applied to the lesion to reduce pain during Nd:YAG laser treatment affects treatment success.

Materials & Methods:

A total of 73 lesions from 19 patients were included in this study. Lesions, not patients, were randomized. Before the procedure, medical technicians assigned random numbers to the patients' lesions. Using a pre-study randomization program, all 73 numbers had been randomly distributed into two groups: cooling on and cooling off. We then performed the procedure with the cooling system on or off based on the group assigned to each number. Three sessions of treatment applied to both groups.

Results:

The results of the study indicated that the cooling process had a negative effect on the treatment outcome. In addition, we have obtained valuable information about Nd:YAG laser treatment for warts in general. It was found that as the patients' age and the duration of the wart increased, the effectiveness of Nd:YAG laser treatment decreased. Patients who had received prior treatments for warts responded less favorably to the laser treatment. Furthermore, we observed that longer intervals between treatment sessions delayed lesion healing.

Conclusion:

Our study supports the hypothesis that the cooling process during Nd:YAG laser treatment for warts has a negative impact on treatment efficacy. Moreover, important insights were gained regarding other variables that may influence the response to Nd:YAG laser treatment for warts. Additionally, our study offers a comprehensive summary of the existing research on wart treatment using Nd:YAG laser up to this point.

Abstract N°: 1727

Literature review: laser treatments for ethnic and smoking-related lip hyperpigmentation

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Introduction & Objectives:

The lips are a key aesthetic facial feature, playing a role in facial expressions and physical attraction. Plump and pink lips are often viewed as a beauty standard, particularly among women. In North African populations, ethnic and smoking-related lip hyperpigmentation (HPL) is a frequent concern due to the prevalence of darker skin phototypes (IV and V). Smoking and sun exposure can exacerbate this condition, impacting patients' quality of life. Current treatments are often limited and unsatisfactory. Pigment lasers have shown promising results in many studies, with minimal and temporary side effects. Ablative and picosecond lasers have also demonstrated good outcomes. Various laser parameters are applied based on melanin absorption, chromophore location, and patient phototype, with most studies reporting satisfactory results and moderate side effects.** This work aims to review the literature on laser treatments for ethnic and smoking-related lip hyperpigmentation.

Materials & Methods:

We conducted a literature review using PubMed, ScienceDirect, and ClinicalKey.

Results:

For patients with darker phototypes, using the lowest laser fluence to achieve the desired endpoint (frosting) is recommended to minimize the risk of post-inflammatory dyschromia. Patients should receive guidance on post-treatment care, including sun protection and lip hydration, and early follow-up is essential to address any side effects promptly. Evaluating pain during treatment may help predict outcomes, as severe pain may signal inflammation, increasing the risk of post-inflammatory hyperpigmentation. Small spot sizes (2-3 mm) are advised due to the thin vermilion epidermis. Prophylactic antiviral treatment is recommended for patients with a history of recurrent herpes labialis. Smoking cessation should be advised to maintain results and prevent recurrence.

Conclusion:

The causes of lip hyperpigmentation vary and may signal underlying conditions. Accurate diagnosis is vital before treatment, and pre-treatment consultation is essential to select suitable candidates and rule out contraindications.

Abstract N°: 1983

Recognized Botanical Treatment (AIH) To Improve Stretch Marks: New Proofs Of Efficacy Thanks To Novel Generation 3D Skin Model Integrating Vascular Networks

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Introduction & Objectives:

Stretch marks are disfiguring dermatological skin lesions caused by intense stretching, leading to dermal collagen, elastin disruption and vessels dilatation.

Despite high prevalence: after maternity, weight loss or during puberty, effective treatments remain limited.

Historical AIH complex - of Alchemilla (A. vulgaris), Ivy (H. helix), Horsetail (E. arvense) - has demonstrated efficacy in clinical trials: A multicenter study showed no appearance of stretch marks in 78% of 37 pregnant women after application of AIH; and during observational study, conducted under gynecologists control, with 87 pregnant women (having family and/or personal history of stretch marks), preventing efficacy has been proven for 95% of women. No stretch marks appeared during pregnancy nor after childbirth for 4 out of 5 volunteers; and overall severity (as Striae Index*) did not statistically increase.

To go further in understanding biological mechanisms behind observed clinical efficacy, in vitro tests were performed. Available skin models - providing insights into extracellular matrix degradation and epidermal atrophy -, often lack key biomechanical and vascular components, limiting ability to fully replicate stretch mark physiopathology.

Therefore, novel full-thickness three-dimensional (3D) skin model has been developed.

Materials & Methods:

Full-thickness 3D lesional skin model was engineered using primary cutaneous and endothelial cells directly extracted from human striae, which recreate specific cellular phenotype associated with stretch marks. These cells were cultivated during 49 days into biomimetic porous scaffold made of chitosan-cross-linked collagen glycosaminoglycan polymer designed to support cell adhesion, proliferation, and extracellular matrix remodelling. 3D skin model engineered with non-lesional cells from same donor was used as healthy control.

Results:

Morphological analyses of “stretch-marks 3D skin model” confirmed presence of key structural features, as disrupted collagen fibres, epidermal atrophy, and microvascular changes. Immunohistological analysis revealed drastic decrease of collagen-1, elastin and integrin-alpha6 expression compared to control. Remarkably, CD31 immunostaining demonstrated that endothelial cells adhered and proliferated to form capillary-like structures embedded in neo-synthetized extracellular matrix. Lesional skin model showed significant decrease in vascularity density and impaired vascular organisation compared to control.

Treatment with 0.25% AIH significantly decreased dermal fibers degradation compared to non-lesional control: by 73% (p=0.99E-05) for collagen-1 and by 53% (p=0.34E-01) for integrin-alpha6. Most importantly, AIH rescued vascular alterations by restoring 77% (p=0.32E-06) of CD31.

Conclusion:

AIH is confirmed to be efficient on skin disorders linked to stretch marks thanks to restauration of dermal major proteins (collagen-1, integrin-alpha6) and vascular components.

Depper understanding of biological mechanisms involved in efficacy has been allowed by development of novel full-thickness 3D skin model that mimics stretch marks. By uniquely integrating both patient-derived endothelial and cutaneous cells, model provides a more physiologically relevant platform compared to existing models and facilitates understanding AIH complex induced skin improvement.

*Sum of 2 severity scales on amount and erythema intensity.

Abstract N°: 2140

Migratory Bioalcamid Filler and Chronic Complications in the Lower Extremity: A Case Report

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Introduction & Objectives:

Polyalkylamide (marketed as Bio-Alcamid®) is a permanent synthetic filler composed of approximately 4% alkylimide network and 96% water. Originally indicated for lip and facial augmentation, it was advertised as easily removable when injected in large volumes. Early reports suggested low complication rates; however, subsequent studies documented unacceptably high prevalences of inflammation, hardening, and migration. Here, we describe a patient who experienced persistent lower extremity edema, recurrent inflammatory episodes, and neurological deficits following large-volume Bio-Alcamid® injection in the gluteal region.

Materials & Methods:

A 45-year-old patient presented with a two-year history of intermittent, and a one-year history of constant, painful swelling and redness from the proximal thigh to mid-tibia on the left side. Initial assessment pointed toward recurrent cellulitis, but routine laboratory values and response to antibiotics were inconsistent with a typical infectious process. Detailed history revealed bilateral gluteal filler injections using approximately 40 cc of Bio-Alcamid® three years prior.

Magnetic resonance imaging (MRI) and ultrasonography (USG) demonstrated multiple heterogenous foreign material deposits scattered along the lateral thigh down to the mid-tibia. On electromyography (EMG), axonal damage of the left sciatic nerve was identified, corresponding with progressive weakness and sensory loss. The chronic inflammatory flares suggested a filler-related foreign-body reaction rather than straightforward infections. The patient was referred to plastic surgery for potential surgical debridement and continued under close monitoring for recurrent inflammatory episodes.

Results:

Imaging confirmed extensive migration of the polyalkylamide filler distant from the original injection sites. Despite trials of conservative management, including antibiotics and anti-inflammatory regimens, the patient experienced persistent symptoms and repeated “cellulitis-like” attacks. The nerve involvement indicated that the inflammatory process extended beyond soft tissues, placing the patient at risk of permanent neurological injury. Surgical consultation recommended thorough debridement to halt further complications.

Conclusion:

This case highlights the potential for bioalcamid (polyalkylamide) fillers to migrate and cause severe chronic complications—ranging from inflammatory pseudocellulitis to nerve compromise—even years after the initial injection. Clinicians should suspect filler-related issues in patients presenting with unexplained swelling, pain, and recurrent “infection-like” episodes, especially when conventional treatments fail. Timely recognition, imaging to localize migratory filler deposits, and appropriate surgical intervention can be critical in preventing irreversible damage.

Abstract N°: 2303

post filler cutaneous sarcoidosis : Case report

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Introduction & Objectives: Filler injections are widely used in aesthetic medicine specially those with hyaluronic acid derivatives due to their results in reducing wrinkles, lip augmentation, and scar treatment. In addition to their low risk of serious side effects, ensured by their biocompatibility and resorbable nature. However, it is important to recognize that various complications may arise following these injections. We will be describing the case of cutaneous sarcoidosis induced by filler products.

Materials & Methods:

Observation

Results:

This the case of a 55-year-old patient with no significant medical history, who consulted for the appearance of asymptomatic subcutaneous nodules on her face that had been evolving for 2 months. The patient reported having undergone mesotherapy a year ago. In fact, she received hyaluronic acid injections to fill the under-eye hollows and nasolabial folds, 3 weeks prior to the onset of symptoms.The examination showed the presence of millimetric, firm, and painless subcutaneous nodules arranged linearly on the forehead, lower eyelids, nasolabial folds, and perioral region. A skin biopsy was performed. Histopathological analysis revealed the presence of a non-necrotizing granulomatous inflammation compatible with the diagnosis of sarcoidosis.

Filler injections are becoming increasingly popular for aesthetic purposes. However, all injectable products used as dermal fillers can lead to the formation of foreign body granulomas, with an incidence ranging from 0.01 to 1.0%. Granulomas can appear at any time, from 6 months to several years after the injection. Although hyaluronic acid is generally considered safe and biocompatible, inflammatory reactions may occur, especially in cases of over-correction, injecting into a sensitive anatomical area, or in patients predisposed to inflammatory reactions. The pathogenesis of post-injection granulomatous complications is complex and involves several mechanisms. Among them, the cellular immune response plays a key role, with the activation of T lymphocytes and macrophages in response to filler product fragments. This activation can lead to granuloma formation and chronic inflammation. When it comes to cases of post-filler cutaneous sarcoidosis, only a few cases have been reported in the literature. Sarcoidosis is a systemic inflammatory disease characterized by the formation of non-caseating granulomas in various organs, including the skin. The association between sarcoidosis and filler injections is not well understood, but it is possible that the injected products trigger an inflammatory response that leads to the formation of sarcoid granulomas in some genetically predisposed individuals. In our case, the patient developed cutaneous sarcoidosis with non-necrotizing granulomas in the perioral area after injections in the nasolabial folds. This raises questions about the relationship between aesthetic injections and the development of cutaneous sarcoidosis, plus the underlying mechanisms behind this association.

Conclusion: The discussion of granulomatous complications due to hyaluronic acid injections, particularly post-filler cutaneous sarcoidosis, is an important topic to explore in the context of aesthetic medicine. Once informed and written consent is obtained, careful evaluation of medical history and close monitoring of patients after similar aesthetic procedures are essential for the appropriate management of potential complications.

Abstract N°: 2306

Pseudolymphoma after laser tattoo removal

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Introduction & Objectives:

This is a benign, reactive inflammatory cellular infiltrate consisting of varying amounts of medium and large T- or B-lymphocytes, or a mixed population, which arises in response to an antigenic stimulus (e.g., Borrelia, injections, tattoos, and arthropod bites), although in some cases the cause may be unknown. Our aim is to demonstrate the need for the classification of non-allergic tattoo complications.

Materials & Methods (Материалы и методы):

A 39-year-old woman developed pruritic vesicular lesions confined to the red areas of her tattoo on her right ankle, after undergoing a neodymium nanosecond laser treatment in July 2023. The lesions appeared 10 days following the laser procedure. She was prescribed betamethasone cream 0.05%, but there was no improvement.

In 2024, the patient developed pruritic nodules at the sites of laser exposure. She was referred for a biopsy, followed by immunohistochemistry (IHC) analysis, with a provisional diagnosis of sarcoidosis or sarcoid reaction.

The excisional biopsy revealed: epidermis with hyperkeratosis, granulosis, and acanthosis. In the upper and middle dermis, there was a massive lymphoid cell infiltrate with moderately pronounced pleomorphism.

Lymphoid cells expressed CD2, CD3, and CD5. The ratio of CD4 cells to CD8 cells was 3:1. Accumulations of CD20+ B-cells were noted, with CD30+ cells present as single entities. The Ki67 proliferative index was 5%. Among the cells of the infiltrate, artificial red pigment was present.

Conclusion: The histological changes and immunophenotype of the infiltrating cells are consistent with T-cell lymphoid hyperplasia/pseudo-lymphoma of the lichenoid reaction type. There is no evidence of skin lymphoma.

An open search was conducted on PubMed using the terms “tattoo,” “complications,” and “skin.” No limits were set on the period, language, or publication type of the articles.

Results:

The patient was treated with clobetasol 0.05% ointment under occlusion for 10 days, along with phonophoresis using hydrocortisone (N°14). There was positive progress with the therapy. Hyperpigmented post-inflammatory spots appeared on the atrophic areas of the skin in the nodular region.

Conclusion:

There is a clear need for further research into the classification of tattoo-related complications, particularly non-allergic inflammatory reactions. Physicians should be aware of these potential risks and be prepared to handle them promptly and effectively. As the practice of tattooing continues to grow globally, both in popularity and complexity, it is essential to prioritize the development of guidelines and protocols that ensure the safety and health of individuals seeking body art. Additionally, educating the public about potential risks, proper aftercare, and when to seek medical attention is critical in minimizing adverse reactions and ensuring safe tattooing practices.