

AMWC

SOUTHEAST
ASIA

AESTHETIC & ANTI-AGING MEDICINE WORLD CONGRESS

21-22
NOV, 2024

POST-CONGRESS COURSE
23 NOV, 2024

In partnership with

A4M

ABSTRACTS

BANGKOK, THAILAND
INTERCONTINENTAL CONVENTION CENTRE

www.amwc-southeastasia.com



20 CME CREDITS



im-aesthetics
informa medical aesthetics



Organized in cooperation with
the official DST Dermatological
Society of Thailand



Under the scientific supervision
of the Aesthetic Multispecialty
Society (AMS)



AMWC Southeast Asia 2024
is supported by the Thailand
Convention and Exhibition Bureau

Submitter
Favade Aditya
adifavade@gmail.com - India

Presenter
Favade Aditya
adifavade@gmail.com - India

#7841

SCALP MICROPIGMENTATION: AN INNOVATIVE SOLUTION FOR HAIRLOSS

52 - Hair restoration

Favade A

Background/Objectives: Scalp Micropigmentation is a medical, non-surgical, cosmetic tattoo that gives a illusion of a close buzz cut hairstyle on a bald head or adds density to a thinning hair. The procedure can also be used to conceal scars from hair transplantation, hide the visual impact of burns or to treat hair loss through skin conditions such as Alopecia. The technique called scalp micropigmentation uses specialized techniques and conventional cosmetic tattoo instruments and pigments in a stippling pattern on the scalp.

Methods: A special designed needle is used to gently inject natural pigment into the skin layer to replicate each hair follicle. To apply the treatment, the correct needle group is choosed. Then the bioresorbable pigment color is used which will blend well with the patient's scalp or existing hair. The utility of SMP is to act as a permanent concealer in such a way that the targeted artistic effect is similar to the visual effect of a stippled painting as dots are created between the pores of a balding scalp. A scalp micropigmentation treatment requires 2 to 3 outpatient sessions that are spaced a week apart. Each session takes a couple of hours depending on the size of the treatment area.

Results: A variety of alopecias, refractory to treatment and hair transplant deformities, impact millions of men and women. Many of these deformities can be concealed with scalp micropigmentation, making the deformities minimally detectable. It is a great therapeutic option for both male and female patients with AGA, post transplant scars, posthair transplant to further augment results, and cicatricial alopecia (discoid lupus erythematosus, lichen planopilaris, folliculitis decalvans, inflammatory tinea capitis, dissecting cellulitis, central centrifugal cicatricial alopecia, acne keloidalis nuchae, keratosis follicularis spinulosa decalvans).

Conclusions: Unlike medical devices, scalp micropigmentation offers a tattoo-based, non-medical "cover-up" that effectively hides unsightly conditions on the scalp and creates the illusion of thicker hair. Scalp micropigmentation is destined to become a standardized offering for physicians specializing in cosmetic office procedures.

Submitter
Waseem Saman
samanwasim@yahoo.com - Pakistan

Presenter
Saman Waseem
samanwasim@yahoo.com -

#8220

Acne scarring treatment in our aesthetic practice.

42 - Scars & acne

Saman W

Background/Objectives: Living with acne scars can be emotionally challenging for those who suffer from this condition. Studies conducted on people living with acne scars have shown higher level of insecurities and low levels of confidence affecting their mental health badly. Most of these patients have very limited or no treatment offered in the past. Modalities used were a combination of treatments including chemical peeling, microneedling/RF with PRP, ER-Yag laser for resurfacing (if needed). Number of treatments were different according to the type, depth and duration of scars. Chemical peels were done every 2 wks apart and microneedling/RF after 3-4 wks. At least 4-6 sessions were needed to see the obvious result in majority of patients.

Methods: My study focuses on different treatment options used for mild to moderate post acne scarring.

Results: Our treatment approach has showed improvement in more than 75- 80% of acne scars with laser intervention.

Conclusions: Chemical peeling, microneedling/RF With PRP is the best treatment approach for acne scarring. It is cost effective and has shown amazing results in our clinical practice.

Submitter
Waseem Saman
samanwasim@yahoo.com - Pakistan

Presenter
Saman Waseem
samanwasim@yahoo.com -

#8221

Acne scarring treatment in our aesthetic practice.

42 - Scars & acne

Saman W

Background/Objectives: Living with acne scarring can be emotionally challenging for those who suffer from this condition. Studies conducted on people living with post acne scars indicated a higher level of insecurities and low self confidence which in return effects their mental health badly.

Methods: My current study focuses on the treatment options for mild -severe post acne scarring. Mostly patients in the past patients were offered no treatment. Modalities used were a combination of chemical peeling, Microneedling with PRP, RF and ER-yag laser for resurfacing (if needed). Number of session vary according to the severity and duration of scars. Chemical peeling was done after every 2 wks and microneedling with PRP every 3wks apart and RF after 4-5 wks gap. At least 3-6 sessions were needed to see the obvious results.

Results: With this treatment approach we have seen greater than 75-80% resolution of scars with laser intervention.

Conclusions: Chemical peeling, microneedling with PRP and RF is preferred treatment approach for post acne scarring. It has shown excellent results in our clinical practice and is very cost effective as well.

Submitter
Gupta Atula
skinaidlab@gmail.com - India

Presenter
Gupta Atula
atula.gupta81@gmail.com -

#8234

Sequential peels in the treatment of dermatologic and aesthetic indications

40 - Cosmeceuticals, Peels & Superficial regimens

Gupta A

Background/Objectives: Peeling agents showing improvements in different dermatologic and aesthetic concerns have made chemical peels a very versatile procedure. Different molecules have unique mechanisms of actions and combining them in different ways can offer a synergistic effect on the primary condition. Sequential peel is a technique in which peels are applied in sequence. The first peel is applied, and its action is terminated after a specific amount of time. This is followed by the application of another peeling agent which can be left on as a leave on peel or may be neutralized after a certain amount of time depending on the peel and the indication being treated. The first peel enhances the penetration of the second peeling agent by causing a controlled exfoliation resulting in a greater peel depth. Different peeling agents have different acidity (pKa) and combining them in a single formulation may not be pharmacologically compatible and may disturb their individual efficacy. Hence two peels are applied one after another in order to achieve the optimal result of both the peeling agents. Sequential peeling is effective in acne, acne with post inflammatory hyperpigmentation, scars, photoaging, tanning, melasma, lichen planus pigmentosus, keratosis pilaris, acanthosis nigricans, cutaneous amyloidosis and skin rejuvenation.

Submitter
Toribio Tammy
dratammytoribio@gmail.com - Dominican Republic

Presenter
Toribio Tammy
dratammytoribio@gmail.com - Dominican Republic

#8239

"Aesthetic Approach of the Oncological Patient"

40 - Cosmeceuticals, Peels & Superficial regimens

Toribio T

Background/Objectives: "Aesthetic Approach of the Oncological Patient" Objectives: Cancer is an increasingly common disease. According to WHO data, the number of cases of this pathology grows every year. The objective of oncological aesthetic medicine is to prevent, improve and treat totally or partially the unsightly aspects of the cancer patient to benefit their quality of life, providing treatments aimed at preventing and minimizing the side effects of antineoplastic or surgical treatments of the cancer patients. Methods: A systematic search of the subject was carried out in bibliographic reviews of medical journals, articles specialized in oncology and bibliographic references of textbooks PubMed, Medline, Scielo, JCAD, RESEARCHGATE, Sciencedirect, in accordance with the PRISMA statement. All searches were performed between January 2018 and January 2024. Results: The results obtained in this research showed us the efficacy of medical-aesthetic support in oncology to significantly reduce the anguish and concern of the patient in the face of this disease, improving their recovery; This effect goes beyond improving physical appearance but also these aesthetic treatments favor the patient to maintain a positive state of mind and feel better about himself despite going through a disease as catastrophic as cancer. Conclusion: I recognize that the aesthetic medicine approach in cancer patients is vital to help improve their recovery process, since cancer therapies cause undesirable side effects on the skin that directly affect patients' self-esteem; For this reason, aesthetic treatments are an indispensable tool that allows us to offer comprehensive care for the aesthetic treatment of the skin supported by complementary therapies for the management of this disease. References: Serena Oliveri, Flavia Faccio, Silvia Pizzoli, Dario Monzani, Carolina Redaelli, Mirella Indino, and Gabriella Pravettoni. A pilot study on aesthetic treatments performed by qualified aesthetic practitioners: efficacy on health-related quality of life in breast cancer patients. Published online 2019 Feb 20. doi: 10.1007/s11136-019-02133-9 PMCID: PMC6522456/PMID: 30788654 Paloma Tejero, Hernán Pinto, Aesthetic Treatments for the Oncology Patient. Published book Nov 30, 2020 by CRC press, ISBN 97811305571 Oliveri, S., Faccio, F., Pizzoli, S. et al. A pilot study on aesthetic treatments performed by qualified aesthetic practitioners: efficacy on health-related quality of life in breast cancer patients. Qual Life Res 28, 1543–1553 (2019). <https://doi.org/10.1007/s11136-019-02133-9> Bianchi A (2020) "ONCO-AESTHETIC", A new medical approach to improve quality of life in cancer patients. Health Edu Care 5. DOI: 10.15761/HEC.1000181 Cardoso, Jaime S., Silva, Wilson, Cardoso, Maria J. Evolution, current challenges, and future possibilities in the objective assessment of aesthetic outcome of breast cancer locoregional treatment Crossref DOI link: <https://doi.org/10.1016/J.BREAST.2019.11.006> Published: 2020-02 Steven Dayan, MD, Alexander Rivkin, MD, Jonathan M Sykes, MD, Craig F Teller, MD, FAAD, Susan H Weinkle, MD, Garrett T Shumate, BS, Conor J Gallagher, PhD. Aesthetic Treatment Positively Impacts Social Perception: Analysis of Subjects From the HARMONY Study. Aesthetic Surgery Journal, Volume 39, Issue 12, December 2019, <https://doi.org/10.1093/asj/sjy239>

Submitter
McGloin Claudia
claudia@thenewyouclinic.ie - Ireland

Presenter
Claudia McGloin
claudia@thenewyouclinic.ie - Ireland

#8244

Preventing Potential Platelet Rich Plasma Complications

48 - Complications - avoidance and management

Claudia M

Background/Objectives: Platelet Rich Plasma (PRP) has been widely used over the last few decades for a variety of clinical indications. Hailed as being one of the safest medical aesthetic treatments there is, we must take note that there has been reports of 6 cases of blindness, 6 of these irreversible following PRP injections. In addition, there has also been cases of an allergic reaction following PRP injection. In this presentation, Claudia McGloin reviews a reported case of allergic reaction following PRP injection and asks the question, do we consider PRP to be a safe treatment without risks or complications because we know its the patients own blood and we assume that their bodies will not reject it or have an allergic reaction to it? The aim of this presentation is to present the case and dissect the findings to incorporate the safety aspect of PRP.

Submitter
McGloin Claudia
claudia@thenewyouclinic.ie - Ireland

Presenter
Claudia McGloin
claudia@thenewyouclinic.ie - Ireland

#8245

Perfect Pair - Platelet Rich Plasma & Polynucleotides

51 - Regenerative aesthetics

Claudia M

Background/Objectives: Regenerative Medicine is a hot topic in the Medical Aesthetic arena. Treatments such as Platelet Rich Plasma, Exosomes and Polynucleotides are being hailed as game changers. While these procedures are used on their own, it is possible to combine these in order to give patients optimum results for skin rejuvenation. In this presentation, Claudia McGloin discusses supercharging treatments and results with the powerhouse of Platelet Rich Plasma and Polynucleotides in combination. This cutting-edge combination enables patients to achieve significant anti-ageing benefits without surgery or downtime. These innovative therapies complement each other to safely and effectively to restore a more youthful appearance while also improving skin health. This dynamic duo offers an exciting new frontier in anti-ageing science.

Submitter
McGloin Claudia
claudia@thenewyouclinic.ie - Ireland

Presenter
Claudia McGloin
claudia@thenewyouclinic.ie - Ireland

#8246

Platelet Rich Plasma - Past and Future

51 - Regenerative aesthetics

Claudia M

Background/Objectives: Platelet Rich Plasma while not a new treatment is one that is often misunderstood. Many injectors only know its use for facial rejuvenation and while it is used for a variety of clinical indications, many do not know the origin or the history of PRP. In this presentation, Claudia McGloin will look at the history of PRP and through the years to current practice, clinical indication and conclude with future developments of PRP in Regenerative Medicine.

Submitter
Mcglain Claudia
claudia@thenewyouclinic.ie - Ireland

Presenter
Claudia Mcglain
claudia@thenewyouclinic.ie - Ireland

#8250

Benefits to Presenting at Conferences

73 - Marketing & Practice management

Claudia M

Background/Objectives: Speaking at industry events can have a hugely positive influence on your professional reputation. Not only does it demonstrate your leadership and expertise amongst peers, it can also highlight to potential patients that you're someone they can trust. But with so many aesthetic practitioners looking to enhance their profile and actively seeking limited speaking slots, it's essential that you nail any opportunity you get first time round. Following many years of speaking at national and international conferences, I've learnt some useful tips along the way. Here I share my top dos and don'ts.

Submitter
Tsubouchi Rieko
tsubouchi@ginzaskin.com - Japan

Presenter
Tsubouchi Rieko
tsubouchi@ginzaskin.com - Japan

#8251

HA

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Tsubouchi R¹

¹Ginza Skin Clinic, Tokyo, Japan

Background/Objectives: HA

Methods: AA

Results: AA

Conclusions: AA

Submitter
Tsubouchi Rieko
tsubouchi@ginzaskin.com - Japan

Presenter
Tsubouchi Rieko
tsubouchi@ginzaskin.com - Japan

#8252

PDT

42 - Scars & acne

Tsubouchi R¹

¹Ginza Skin Clinic, Tokyo, Japan

Background/Objectives: AA

Methods: AA

Results: AA

Conclusions: AA

Submitter
Chiapello Damian
damian.chiapello@hotmail.com - Argentina

Presenter
Chiapello Damian
damian.chiapello@hotmail.com -

#8257

Do not forget the hands : bioestimulation in a split hands treatment with calcium hidroxiapatite and hialuronic acid. Case series

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Chiapello D

Background/Objectives: Back Hand rejuvenation has become an increasingly requested treatment since the hands are in constant expression and due to their visibility and interaction they play an important role in achieving a balance with other structures such as the face, neck and décolletage. The visibility of the structures underlying the skin such as veins and tendons due to thinning of the skin accompanied by underlying fatty atrophy, makes the hands look aged and this is why dorsal hand rejuvenation is on the rise. Knowing the anatomy in detail is mandatory to perform the treatment correctly and avoid complications. We have multiple bibliography of dissections explaining the layered anatomy of the back of the hands, describing seven layers: from superficial to deep, 1 skin, 2 superficial dorsal lamina, 3 superficial dorsal fascia, 4 intermediate dorsal lamina, 5 intermediate dorsal fascia, 6 deep dorsal lamina and 7 deep dorsal fascia. Anatomical knowledge allowed the creation of different application techniques for said treatment: • Bolus Technique • Tenting Technique • Proximal-to-Distal Fanning Technique: • Distal-to-Proximal Single-Line Technique The most used technique today is proximal to distal fanning technique through a single entry point at the level of the most distal wrinkle of the wrist at the level of the middle finger, the 22g or 25g cannula is introduced until reaching the superficial dorsal lamina (subcutaneous plane) the cannula is advanced to the height of the interdigital space and once there the application in retrainjection begins, performing the same procedure in the 4 interdigital spaces.

Methods: case series through a prospective and observational study where 4 female patients will be treated on the back of their hands in a split manner: right hands treated with calcium hydroxyapatite (1:1 dilution, 0.75ml) left hands treated with Blend (calcium hydroxyapatite 1:1 dilution 0.75ml/hyaluronic acid 0.50ml), in turn the treatment will be repeated after 2 months using a Subcutaneous application technique proximal to distal fan technique with canula. Photographs will be taken prior to the study, immediately after application and after 2 months. This same protocol will be carried out with the second application of the product. The global aesthetic improvement scale (GAIS) score. will be use to compare before and after treatment.

Results: after immediate treatment we can see an improvement at the volume loss in the dorsal hand. A major immediate result is observed when we treat the dorsum of the hand with a blend (calcium hidroxiapatite / hialuronic acid) but after time (two month) if we compare the result not significant differences are observe between the right hand (calcimun hidroxiapatite) and the left hand (blend of Calcium hidroxiapatite / hialuronic Acid) so seems to be mandatory to aim at the dorsum of the hand with bioestimulatory treatment however is a good option blend calcium hidroxiapatite with hialuronic acid to achive an improvement dorsum enhancment sonner for our patients while waiting the Calcium hidroxiapatite effect.

Conclusions: after this cases series we can see the importance to dont forget that hands have and important role in our daily expressions. We use our hand constantly and they are permanent in contact with others so we do not forget that hands express aging and improve hands let us to create a balance between others anatomical structures such as face, neck and décolletage. Dorsum hands techniques

References:Kim JS. Detailed Sonographic Anatomy of Dorsal Hand Augmentation With Hyaluronic Acid and Calcium Hydroxyapatite Fillers. *Aesthet Surg J*. 2019 Sep 13;39(10):1096-1106. doi: 10.1093/asj/sjy227. Figueredo VO, Miot HA, Soares Dias J, Nunes GJB, Barros de Souza M, Bagatin E. Efficacy and Safety of 2 Injection Techniques for Hand Biostimulatory Treatment With Diluted Calcium Hydroxylapatite. *Dermatol Surg*. 2020 Oct;46 Suppl 1:S54-S61. Mischeels P, Besse S, Sibon M, Elias B. Hand Rejuvenation With A Hyaluronic Acid-Based Dermal Filler: A 12-Month Clinical Follow-Up Case Series. *J Drugs Dermatol*. 2021 Apr 1;20(4):451-459. doi: 10.36849/JDD.2021.5154. PMID: 33852241. Casabona G, Kaye KO. Commentary on: Ultrasound Analyses of the Dorsal Hands for Volumetric Rejuvenation. *Aesthet Surg J*. 2022 Sep 14;42(10):1127-1129. doi: 10.1093/asj/sjac100. PMID: 35439290. Goldie K, Peeters W, Alghoul M, Butterwick K, Casabona G, Chao YYY, Costa J, Eviatar J, Fabi SG, Lupo M, Sattler G, Waldorf H, Yutskovskaya Y, Lorenc P. Global Consensus Guidelines for the Injection of Diluted and Hyperdiluted Calcium Hydroxylapatite for Skin Tightening. *Dermatol Surg*. 2018 Nov;44 Suppl 1:S32-S41. doi: 10.1097/DSS.0000000000001685. Erratum in: *Dermatol Surg*. 2019 Feb;45(2):327. PMID: 30358631. Graivier MH, Lorenc ZP, Bass LM, Fitzgerald R, Goldberg DJ. Calcium Hydroxyapatite (CaHA) Indication for Hand Rejuvenation. *Aesthet Surg J*. 2018 Apr 6;38(suppl_1):S24-S28. doi: 10.1093/asj/sjy013. PMID: 29897518. Frank K, Koban K, Targosinski S, Erlbacher K, Schenck TL, Casabona G, Braz AV, Pavicic T, Cotofana S. The Anatomy behind Adverse Events in Hand Volumizing Procedures: Retrospective Evaluations of 11 Years of Experience. *Plast Reconstr Surg*. 2018 May;141(5):650e-662e. Massidda E. Starting Point for Protocols on the Use of Hyperdiluted Calcium Hydroxylapatite (Radiesse®) for Optimizing Age-Related Biostimulation and Rejuvenation of Face, Neck, Décolletage and Hands: A Case Series Report. *Clin Cosmet Invest Dermatol*. 2023 Nov 29;16:3427-3439. Har-Shai L, Ofek SE, Lagziel T, Pikkil YY, Duek OS, Ad-El DD, Shay T. Revitalizing Hands: A Comprehensive Review of Anatomy and Treatment Options for Hand Rejuvenation. *Cureus*. 2023 Feb 28;15(2):e35573. doi: 10.7759/cureus.35573. PMID: 37007409; PMCID: PMC10063163. Adel N. Volumization and Global Biostimulation Using Calcium Hydroxyapatite Filler: A Dual Approach for Hand Rejuvenation. *Plast Reconstr Surg Glob Open*. 2023 Nov 17;11(11):e5396. doi: 10.1097/GOX.00000000000005396. PMID: 38025623; PMCID: PMC10656086. de Almeida AT, Figueredo Y, da Cunha ALG, Casabona G, Costa de Faria JR, Alves EV, Sato M, Branco A, Guarnieri C, Palermo E. Consensus Recommendations for the Use of Hyperdiluted Calcium Hydroxyapatite (Radiesse) as a Face and Body Biostimulatory Agent. *Plast Reconstr Surg Glob Open*. 2019 Mar 14;7(3):e2160. Corduff N, Chen JF, Chen YH, Choi HS, Goldie K, Lam Y, Lesthari NI, Lim TS, Luo S, Quianbao A, Siew TW, Tseng FW, Chao YYY. Pan-Asian Consensus on Calcium Hydroxyapatite for Skin Biostimulation, Contouring, and Combination Treatments. *J Clin Aesthet Dermatol*. 2021 Aug;14(8):E76-E85. Epub 2021 Aug 1. PMID: 34840663; PMCID: PMC8570653.

Submitter
Jain Adithi
dradithi.jain@gmail.com - India

Presenter
Jain Adithi
dradithi.jain@gmail.com - India

#8258

Optimizing outcomes: Botulinum toxin & fillers

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Jain A¹

¹Director , Jaipur, India

Background/Objectives: Aging is an intrinsic and extrinsic process that combines multiple factors such as genetic predisposition, environmental factors, lifestyle preferences etc. All of these combine to contribute towards changes in texture, elasticity & strength of dermal appendages which lead to rhytides or wrinkle formation. Age-related transformation of the face include volume loss and tissue deflation, increased skin laxity, and bony resorption. Over time, the changes may accelerate. To combat the changes of aging, we have tools such as botulinum toxin & fillers among injectables with desirable results and efficient safety profile. For best results, a combination approach consisting of injectables, thread lift and energy based devices can be applied. For best results and optimised outcomes, thorough knowledge of the anatomy including the danger areas of the face is a must. Adequate facial analysis and knowledge regarding properties of fillers goes a long way in increasing safety with injecting fillers for various indications. Injection techniques for various sections of the face differ depending on location and the type of filler being used. The presentation will elaborate on suitable techniques for different sections of the face to provide best outcome to the patient. To avoid adverse effects and for guiding beginners, suitable tricks and tips will be included in the presentation. Similar elaboration will be included for botulinum toxin as well. When working with neurotoxin the risk of over relaxation of injected muscle is inevitable. Sometimes, even expert injectors face adverse effects with neurotoxin. In order to minimize this risk, appropriate injecting techniques will be elaborated and correction of disfigurement will also be included.

Submitter
Ng Donald Tiong Leng
ngdonald2110@gmail.com - Singapore

Presenter
Donald Ng
Aesthetic physician / cosmetic surgeon -

#8259

The combination of anchored barbed threads with freelying threads for facial rejuvenation

46 - Threads

Donald N

Background/Objectives: to present experience using threads - spring threads and gamber threads for facial lift and rejuvenation

Methods: 10 cases will be presented with discussion on patient consideration and surgical objectives thread insertion and lift operative and technical details discussed

Results: Before and after patient pics will be presented.

Conclusions: Thread lift remains a minimally invasive and safe option for facial lift and rejuvenation.

Submitter
Bingham Nan
nanjin40@yahoo.co.uk - United Kingdom

Presenter
Bingham Nan
nanjin40@yahoo.co.uk - United Kingdom

#8261

multimodality approach to aesthetic antiaging treatment

45 - Combination treatments

Bingham N¹

¹Elixir Medical Aesthetics , Loughborough, United kingdom

Background/Objectives: traditional aesthetics treatment with only 1 or 2 injectables mainly neurotoxins and fillers are widely practiced in the last 20 years, however by adoptting a multi modality approach and combining various treatments including energy based devices (CO2 ablative laser, IPL, RF microneedling, HiFU) and innovative treatments such as stem cells, and polynuceotides etc, we can achieve a much powerful trasnformation for out clients, these treatments when done in the right combination and sequence in the same setting, can enhace each other's effectiveness and overall give a much better results than having them individulaly in separate settings. However there are relative little guidance or evidence on how to combine these various aesthetics treatment together. A lot of these practices so far practiced are mainly based on trial and error. I have gathered experience by treating some of my patients with this multimodality approach, and I will present these cases in my presentation. In summary, I have noticed a significant reduced down time , quicker response and overal much better clinets' satisfaction.

Submitter
Qureshi Sayam
Sayam.qureshi@gmail.com - India

Presenter
Sayam Qureshi
sayam.qureshi@gmail.com - India

#8262

Treating acne scars in skin of color through MLA as conjunct therapy by achieving picosecond laser end points with the nanosecond laser.

42 - Scars & acne

Sayam Q^{1,1}

¹MD-vikram university , Vikram university , India

Background/Objectives: As acne scar is a result of deep inflammation Multiple treatment modalities for surgical to nonsurgical, peels to lasers and energy-based devices, and ablative to nonablative fractional and nonfractional are available in our armamentarium to improve acne scars Of all the various modalities available, nanosecond lasers are available for the longest period and now with the latest advances are able to improve most acne scars. Combination of technologies when used sequentially or rotationally improves outcome, thus minimizes side effects. The results are better lasting. Understand and MLA and LIOB/LIC effects in skin of color when combined with mnrf and tca cross to treat acne scars. Use of nanosecond laser to achieve picosecond laser end points and exploring it as a new and effective avenue as a less downtime combination treatment in skin of color

Methods: We have achieved picolaser end points with nanosecond lasers to improve acne scars and skin texture as a monotherapy and conjunct therapy with mnrf and tca cross. With the advantage of short pulse durations and gaussian beam profile we have treated patients of darker skin type on the highest of energy with varying passes till the end points achieved keeping the scar type and skin type of patient in mind

Results: Results were appreciable in skin texture improvement as a monotherapy alone and we're great in acne scars when combined with mnrf and tca cross and the beauty was having lesser downtime

Conclusions: It can be considered as one of the avenues to treat acne scars in patients with skin of color without adverse events.

#8263

Application of combined facial aesthetic medicine techniques in a patient with a history of Mastectomy

45 - Combination treatments

Medina C¹, Nome C¹, Tamayo A¹

¹EIMEC, Barcelona, Spain

Background/Objectives: Harmonize the face by applying combined aesthetic medical treatments, focused on preventing and treating signs of the patient's physiological aging, seeking natural results which follow anatomical parameters. Focusing treatments on the patient's safety and general health, reinforcing quality of life, self-esteem and self-love.

Methods: In this clinical case report, the author expresses all his updated knowledge on facial aging, experience in integrative aesthetic medicine, and performs combined techniques applied to this area, prioritizing the patient's general health, mainly psychological health, self-esteem, confidence, and self-love. . After performing an in-person clinical examination and a personalized treatment plan, the patient was informed about the treatments; techniques used; indications before and after each of the treatments; expected results; possible side effects and/or complications. The patient signs informed consent and the treatments are carried out according to the ethical guidelines of the "Declaration of Helsinki" (Ethical principles for medical research in human beings).

Results: The results obtained focus on 8 treatment sessions through the use of combined Aesthetic Medicine techniques. In general terms, quite natural results were obtained, always taking care to harmonize the features of each patient and not transform them. The area that had the most obvious change was in the lower third, specifically the area of the chin, mandibular border and mandibular angle. More vital, more uniform and hydrated skin is also observed. This clinical case was carried out with a combination of aesthetic medicine treatments in the facial area, in order to obtain ideal results. It has been shown that a combined therapy will give us better results than performing only one type of treatment, since they can enhance each other and complement them, because, generally speaking, they act on different tissues and cells. Regarding the patient's psychological well-being, she reports feeling satisfied, happy and very grateful, stating that these treatments, without a doubt, improved her quality of life in all aspects.

Conclusions: The combination of minimally invasive techniques in Facial Aesthetic Medicine produces potential and longer lasting results than a treatment alone. It is important to note that the number of maintenance sessions and the frequency depends on the evaluation of each patient. We must focus on the safety and comprehensive health of the patient and obtaining results that respect tissue and natural times. Aesthetic medicine is capable of improving a person's quality of life.

References: Cotoana, S., Pedraza, A. P., Kaufman, J., Avelar, L. E. T., Gavril, D. L., Hernandez, C. A., Onishi, E. C., Nikolis, A., Sakuma, T., & Frank, K. (2021). Respecting upper facial anatomy for treating the glabella with neuromodulators to avoid medial brow ptosis-A refined 3-point injection technique. *Journal of cosmetic dermatology*, 20(6), 1625–1633. <https://doi.org/10.1111/jocd.14133> Coleman, S. R., & Grover, R. (2006). The anatomy of the aging face: volume loss and changes in 3-dimensional topography. *Aesthetic surgery journal*, 26(1S), S4–S9. <https://doi.org/10.1016/j.asj.2005.09.012> Casabona, G., Frank, K., Moellhoff, N., Gavril, D. L., Swift, A., Freytag, D. L., Kaiser, A., Green, J. B., Nikolis, A., & Cotoana, S. (2020). Full-face effects of temporal volumizing and temporal lifting techniques. *Journal of cosmetic dermatology*, 19(11), 2830–2837. <https://doi.org/10.1111/jocd.13728> Davidovic, K., Melnikov, D. V., Frank, K., Gavril, D., Green, J. B., Freytag, D. L., Heisinger, S., Pavicic, T., Gold, M. H., & Cotoana, S. (2021). To click or not to click - The importance of understanding the layers of the forehead when injecting neuromodulators - A clinical, prospective, interventional, split-face study. *Journal of cosmetic dermatology*, 20(5), 1385–1392. <https://doi.org/10.1111/jocd.13875> Friedman O. (2005). Changes associated with the aging face. *Facial plastic surgery clinics of North America*, 13(3), 371–380. <https://doi.org/10.1016/j.fsc.2005.04.004> Cotoana, S., Alferthofer, M., Schenck, T. L., Bertucci, V., Belezny, K., Ascher, B., Lachmann, N., Green, J. B., Swift, A., & Frank, K. (2020). Anatomy of the Superior and Inferior Labial Arteries Revised: An Ultrasound Investigation and Implication for Lip Volumization. *Aesthetic surgery journal*, 40(12), 1327–1335. <https://doi.org/10.1093/asj/sjaa137> Small R. (2014). Botulinum toxin injection for facial wrinkles. *American family physician*, 90(3), 168–175. Madrazo, Jorge Ariel. (2006). Belleza, sí, pero ¿qué es eso?. *Atenea (Concepción)*, (493), 11–22. <https://dx.doi.org/10.4067/S0718-04622006000100002> Adams, D. C., Rohlf, F. J. & Slice, D. E. A field comes of age: geometric morphometrics in the 21st century. *Hystrix It. J. Mamm.*, 24(1):7-14, 2013 Suwanchinda, A., Rudolph, C., Hladik, C., Webb, K. L., Custozzo, A., Muste, J., Schalet, G., Hamade, H., Frank, K., Patel, A., & Cotoana, S. (2018). The layered anatomy of the jawline. *Journal of cosmetic dermatology*, 17(4), 625–631. <https://doi.org/10.1111/jocd.12728> Mendelson, Bryan & O'Brien, Justin. (2016). The Aging Face. 10.1007/978-3-662-46599-8_60. Johnston V S, Solomon C J, Gibson S J, Pallares-Bejarano A. Human Facial Beauty: Current Theories and Methodologies. *Archives of facial plastic surgery*. Volume 5(5), September/October 2003, p 371–377. Krueger, N., Lueberding, S., Sattler, G., Hanke, C. W., Alexiades-Armenakas, M., & Sadick, N. (2013). The history of aesthetic medicine and surgery. *Journal of drugs in dermatology : JDD*, 12(7), 737–742. Gupta, M. A., & Gilchrist, B. A. (2005). Psychosocial aspects of aging skin. *Dermatologic clinics*, 23(4), 643–648. <https://doi.org/10.1016/j.det.2005.05.012> Glogau R. G. (1996). Aesthetic and anatomic analysis of the aging skin. *Seminars in cutaneous medicine and surgery*, 15(3), 134–138. [https://doi.org/10.1016/S1085-5629\(96\)80003-4](https://doi.org/10.1016/S1085-5629(96)80003-4) Cotoana, S., Pedraza, A. P., Kaufman, J., Avelar, L. E. T., Gavril, D. L., Hernandez, C. A., Onishi, E. C., Nikolis, A., Sakuma, T., & Frank, K. (2021). Respecting upper facial anatomy for treating the glabella with neuromodulators to avoid medial brow ptosis-A refined 3-point injection technique. *Journal of cosmetic dermatology*, 20(6), 1625–1633. <https://doi.org/10.1111/jocd.14133> Cotoana, S., Fratila, A. A., Schenck, T. L., Redka-Swoboda, W., Zilinsky, I., & Pavicic, T. (2016). The Anatomy of the Aging Face: A Review. *Facial plastic surgery : FPS*, 32(3), 253–260. <https://doi.org/10.1055/s-0036-1582234> Cotoana, S., & Lachman, N. (2019). Anatomy of the Facial Fat Compartments and their Relevance in Aesthetic Surgery. *Journal der Deutschen Dermatologischen Gesellschaft = Journal of the German Society of Dermatology : JDDG*, 17(4), 399–413. <https://doi.org/10.1111/ddg.13737> Cotoana, S., Schenck, T. L., Trevidic, P., Sykes, J., Massry, G. G., Liew, S., Graivier, M., Dayan, S., de Maio, M., Fitzgerald, R., Andrews, J. T., & Remington, B. K. (2015). Midface: Clinical Anatomy and Regional Approaches with Injectable Fillers. *Plastic and reconstructive surgery*, 136(5 Suppl), 219S–234S. <https://doi.org/10.1097/PRS.0000000000001837>

Submitter
Qureshi Sayam
Sayam.qureshi@gmail.com - India

Presenter
Qureshi Sayam
sayam.qureshi@gmail.com - India

#8264

Treating active acne in skin of color through MLA by achieving picosecond laser end points with the nanosecond lasers.

42 - Scars & acne

Qureshi S¹

¹MD-vikram university , Ujjain , India

Background/Objectives: Objectives: Understand MLA and LIOB/LIC effects in skin of color to treat active acne lesions effectively and achieve clearance within a week by inducing photothermal action on sebaceous glands by achieving its trt i.e.60ms. Use of nanosecond laser to achieve picosecond laser end points and exploring it as a new and effective avenue as a less downtime combination treatment in skin of color. With the endpoints we mean the purpura and erythema created by picos which settles in 3days without adverse events, the challenge is to achieve same in skin of color without adverse events successfully to target SG

Methods: Materials and methods:- With the advantage of short pulse durations and gaussian beam profile we have treated patients of darker skin type on the highest of energy with varying passes till the end points achieved which in turn created photothermal damage on sebaceous glands making them less active and drying them up keeping the acne type and skin type of patient in mind. Note:- Here with the reference to picosecond end points we have considered the mild immediate purpura and erythema as an endpoints which we can achieve by picosecond and which get better within a week without any adverse events, so the same endpoints we have achieved with nanosecond mla handpiece of gaussian beam profile.

Results: Results An appreciable improvement in skin texture and acne lesions has been seen, in case of fresh acnes reduction can be seen in a week time as a monotherapy and the beauty was having lesser downtime, and in treatment resistant acnes it worked synergistically to give good outcomes.

Conclusions: Conclusion:- Nanosecond mla toning induced LIOB/LIC can give picosecond laser end points without any adverse events in skin of color with the gaussian beam profile 10mm spot size even on the highest of the energy if the laser Power supply is constant, with the pulse duration of 2-3ns., which further gives improvement in skin texture and acne lesions as a monotherapy in early acnes and as combination therapy in treatment resistant or hormonal acnes and with the Lowest downtime and offers a new avenue with the same device with the cost affordability specially in countries like india.

Submitter
Qureshi Sayam
Sayam.qureshi@gmail.com - India

Presenter
Qureshi Sayam
sayam.qureshi@gmail.com - India

#8265

Treating pigmentations of photo melanosis and acanthosis successfully in patients with skin of color with co2 laser

41 - Pigmentation

Qureshi S¹

¹MD-vikram university , Ujjain , India

Background/Objectives: *Introduction:* 1. *CO2 Laser Technology:* * Definition, mechanism, and historical evolution. * Applications in aesthetic and skin rejuvenation. 2. *Benefits:* * Wrinkle reduction, skin tightening, and scar revision. * Improved sun damage, uneven skin tone, and facial pigmentation. * Enhanced collagen production and texture. * Understand CO2 laser technology and its role in aesthetics. * Analyze its benefits for various indications. * Compare CO2 laser with other rejuvenating techniques. * Gain insights into patient selection, treatment, and post-care. * Explore the basic to approach scars and pigmentation with CO2 laser technology.

Methods: 3. *MATERIALS AND METHODS* :- * Ablative vs. Fractional CO2 lasers - advantages and disadvantages. * Patient selection, pre-treatment preparation, and procedure overview. * Post-treatment care protocols and recovery expectations

Results: 5. *Results:-* Before and after of our patients having acne scars and pigmentation Judicial use of appropriate Energy, Number of Passes,Density depending on the Power of Machine can lead us to the amazing and unbelievable improvement in acne scars and pigmentations of the patients with skin of color.

Conclusions: 4. *Conclusion:* * Summary of CO2 laser's benefits and limitations. * Importance of dermatologist expertise for optimal results.

Submitter
Njoo David
davidnjoo@gmail.com - Netherlands

Presenter
Njoo David
davidnjoo@gmail.com -

#8266

Unmet needs in targeted therapy for melasma

41 - Pigmentation

Njoo D

Background/Objectives: The treatment of melasma has always been highly challenging. Clinical outcomes of current therapies remain inconsistent and are often associated with unwanted side effects and high risks of relapses. Melasma is long considered to be solely the result of overstimulation of female sex hormones occurring in genetically predisposed individuals. These factors are difficult or even impossible to interfere with without persevering through more side effects than benefits. In the last decades, evidence from both laboratory and clinical studies show that melasma bears the hallmarks of a photoaging skin disorder. Histopathological findings reveal that melasma is more than merely a disease of melanocytes. There are signs of mild to severe solar elastosis, with significant damage to the basal membrane, an increased number of mast cells and increased vascularization in melasma lesions when compared to the apparently normal skin. Moreover, a variety of growth factors and interleukines secreted by surrounding UV stimulated keratinocytes, fibroblasts, endothelial cells and sebocytes may all contribute to the abnormalities found in melasma. Treatment modalities should therefore not only target the melanocytes and keratinocytes. To date, many interesting therapies including topicals, oral drugs and energy-based devices have been developed to rejuvenate the dermis, restoring the basal membrane, inhibit mast cell function and diminish the vascular component in melasma. Success rates however are highly variable among patients and depends on the proper combination of modalities and on how therapies are adjusted for skin type, concomitant skin disorders and lifestyle. Finally, there is a growing need to optimize sun protection in patients with melasma. As UVA-1 and visible light (blue and infrared) radiations are the main driving forces in promoting melanin synthesis and photodamage / photo-ageing, future sunscreens against these wavelengths should be formulated.

Submiter
Wilianto Wilianto
drwilianto@gmail.com - Indonesia

Presenter
Wilianto Wilianto
drwilianto@gmail.com - Indonesia

#8267

Correlation between the addition of 0.5% Astaxanthin into sunscreen SPF 50 inhibited the increase of erythema score and the decrease of collagen fibres in male wistar rats induced by ultraviolet B

40 - Cosmeceuticals, Peels & Superficial regimens

Wilianto W^{1,2}

¹Everwill Clinic, Berau, Indonesia

²Anti Aging Medicine Program Udayana University, Bali, Indonesia

Background/Objectives: Research in Jakarta in 2016 found that female students aged 18-21 years experienced premature skin aging. About 69% of the number of respondents who did not use sunscreen experienced skin aging. There is a relationship between the use of sunscreen and skin aging[2]. The use of sunscreen is one of the efforts to inhibit skin aging. Astaxanthin 0.5% contained in sunscreen is the latest product that can be a breakthrough to protect the skin longer than ordinary sunscreen[8]. Astaxanthin can prevent cell damage, reduce inflammation in the skin and prevent wrinkles, thinning of the skin and decreased skin elasticity due to ultraviolet rays. It is expected that this product can provide longer and better protection in protecting the skin when exposed to sunlight because the astaxanthin content can prevent the incidence of sunburn and sunburn cells compared to ordinary sunscreen. Astaxanthin in the sunscreen used in this study is a recent discovery. In research by Zakaria, et al., astaxanthin in sunscreen can increase the SPF value, which in the end results can be effective in preventing photoaging[8]. This research wants to prove the effectiveness of astaxanthin products in SPF 50 sunscreen with sunscreen without astaxanthin in preventing photoaging.

Methods: This study compares SPF 50 sunscreen that does not contain astaxanthin and SPF 50 sunscreen containing 0.5% astaxanthin in inhibiting sunburn and collagen fibre decrease. Thirty-six male Wistar rats divided into 2 groups were shaved in the dorsal region with a size of 3x3 cm², then exposed to UVB. After the last exposure in the fifth week, the shined blood was viewed and compared with the visual grading table of erythema grade as follows.

Results: Based on the results of the study, the erythema score in the SPF 50 sunscreen group without astaxanthin (Group A) was 1,67±0,594 higher than the erythema score in the SPF 50 sunscreen group with 0.5% astaxanthin (Group B) 1,11±0,323. Erythema score 2 was more in Group A than Group B. Based on the results of the study obtained collagen density in the SPF 50 sunscreen group without astaxanthin (Group A) 53,26± 6,09% lower than the collagen density of the SPF 50 sunscreen group with astaxanthin 0.5% (Group B) 66,11± 7,25%. Correlation between sunburn and collagen density Based on the results of SPSS calculations, there was no significant correlation between sunburn and collagen density $p=0.085$ ($p > 0.05$). So even though there is mild erythema, it does not mean that collagen density is maintained. Collagen density is still reduced even if the skin is not erythema. Collagen loss due to ultraviolet light exposure has a different mechanism of sunburn.

Conclusions: Based on the results of the study, the addition of astaxanthin 0.5% in SPF 50 sunscreen inhibit the increase of erythema score and the decrease in collagen fibres in rats exposed to ultraviolet B light. This is because astaxanthin is able to act as an antioxidant and increase the role of sunscreen in protecting the skin and preventing damage due to exposure to ultraviolet B light. While also proving that the discovery of astaxanthin 0.5% in SPF 50 is effective in reducing two signs of aging on the skin, namely erythema due to sunburn and decrease of collagen fibers. There was no relationship between sunburn and collagen density in this study. Collagen density may decrease even if the skin is not erythema.

References:[1] Pangkahila, W. 2007. Anti Aging Medicine: Memperlambat Penuaan, Meningkatkan Kualitas Hidup. Jakarta: PT. Kompas Media Nusantara [2] Dewiastuti, M., Hasanah, I.F. 2017. Pengaruh Faktor-Faktor Risiko Penuaan Dini di Kulit Pada Remaja Wanita Usia 18-21 Tahun. Jurnal Profesi Medika, 10(1):21–5. [3] Mestay, C. 2021. Sunburn. Medscape: [Online] Available from https://emedicine.medscape.com/article/773203-overview?reg=1&icd=login_success_email_match_norm#a4 [accessed 6 Juli 2023] [4] D'Orazio, J., Jarrett, S., Amaro-Ortiz, A., & Scott, T. 2013. UV radiation and the skin. International Journal of Molecular Sciences, 14(6), 12222–12248. <https://doi.org/10.3390/ijms140612222> [5] Siller, A., Blaszk, S. C., Lazar, M., & Olasz Harken, E. 2018. Update about the effects of the sunscreen ingredients oxybenzone and octinoxate on humans and the environment. Plastic Surgical Nursing, 38(4), 158–161. <https://doi.org/10.1097/PSN.0000000000000244> [6] Hughes, M.C., Williams, G.M., Baker, P., Green, A.C. 2013. Sunscreen and prevention of skin aging: A randomized trial. Annual Internal Medicine, 158(11):781–790 [7] Li, X., Matsumoto, T., Takuwa, M., Saeed, E. S. A. M., Hirabashi, T., Kondo, H., Fujino, H. 2020. Protective Effects of Astaxanthin Supplementation against Ultraviolet-Induced Photoaging in Hairless Mice. Biomedicine, 8(2):18. <https://doi.org/10.3390/biomedicine8020018> [8] Zakaria, N. N. A., Zamzurie, N. A., & Harith, Z. T. 2021. Evaluation of sunscreen cream incorporated with astaxanthin from Haematococcus pluvialis in different storage conditions. IOP Conference Series: Earth and Environmental Science, 756(1). <https://doi.org/10.1088/1755-1315/756/1/012078> [9] Petric D. 2022. Bakuchiol and astaxanthin: a new weapon for sun protection? Food and Health, 4(3):16. [10] Ekpe, L., Inaku, K., Eyam, E., & Ekpe, V. 2018. Antioxidant Effects of Astaxanthin in Various Diseases - a Review. Oxidants and Antioxidants in Medical Science, October, 1. <https://doi.org/10.5455/oams.20180315075538> [11] Sander, M., Sander, M., Burbidge, T., & Beecker, J. 2020. The efficacy and safety of sunscreen use for the prevention of skin cancer. Canadian Medical Association Journal, 192(50), E1802–E1808. <https://doi.org/10.1503/cmaj.201085> [12] Kaimal S, Abraham A. 2011. Sunscreens. Indian Journal of Dermatology, Venereology and Leprology, 77:238–243 [13] Damayanti, Prakoeswa, C. R. S., Purwanto, D. A., Endaryanto, A., Listiawan, M. Y., Wirohadidjoyo, Y. W., Soetjipto, Siswandono and Utomo, B. 2023. Wistar Rat as Photoaging Mouse Model, Journal of Pakistan Association of Dermatologists, 33(1), pp. 24–29. Available at: <https://www.jpap.com.pk/index.php/jpap/article/view/2016> [14] Setiono, S. 2022. "Pemberian Krim Ekstrak Rambut Jagung (Zea mays L) 55 Menghambat Peningkatan Ekspresi MMP-1 dan Meningkatkan Jumlah Kolagen Dermis pada Tikus (Rattus Norvegicus) Wistar Jantan yang Dipapar UVB" (tesis), Denpasar: Universitas Udayana. [15] Meephansan J, Rungjang A, Yingmema W, Deenonpoee R, Ponnikom S. 2017. Effect of astaxanthin on cutaneous wound healing. Clinical, Cosmetic and Investigational Dermatology, 10:259–65. <https://www.tandfonline.com/doi/epdf/10.2147/CCID.S142795?needAccess=true> [16] Abdlaty, R., Doerwald, M. L., Madooei, A., Sahli, S., Yeh, S., C., A., Zerubia J, et al. 2018. Hyperspectral imaging and classification for grading skin erythema. Frontier in Physics, 6(AUG):1–10. [17] Davinelli, S., Nielsen, M. E., & Scapagnini, G. 2018. Astaxanthin in skin health, repair, and disease: A comprehensive review. Nutrients, 10(4), 1–12. <https://doi.org/10.3390/nu10040522>

Submitter
Phad Sachin
ssachin.sp@gmail.com - India

Presenter
Phad Sachin
ssachin.sp@gmail.com - India

#8270

Treating Striae Distensae (Stretch Marks) with autologous Platelet Rich Plasma (PRP) and Microneedling.

51 - Regenerative aesthetics

Phad S^{1,2}

¹D.DERMATOLOGY, Pune, India

²BAMS, Nashik, India

Background/Objectives: To evaluate the role of microneedling with PRP in treatment of Striae Distensae. Stretch marks (Striae Distensae) are visible linear scars which form in areas of dermal damage produced by stretching of the skin. Stretch marks or Striae Distensae are a very common problem in which treatment remains a challenge. In early stages striae appear pink to red (striae rubra), which over time become atrophic and attained a white colour (striae alba). Despite the rising trend for applying platelet-rich plasma (PRP) in the management of various types of scars, there is no convincing evidence supporting its use. This motivated me to use PRP with microneedling in striae distensae

Methods: The study was conducted on 20 patients with stretch marks. The age of patients ranged from 22 to 40 years.

Results: Clinical improvement in most of cases which was in the form of improvement of texture, pigmentation and decrease of length and width of stretch marks.

Conclusions: Platelet-rich plasma appears to be a safe and effective treatment for atrophic scars. In addition, when added to microneedling, it seems to considerably add to the efficacy of treatment

Submitter
Sofra Xanya
science@iellios.com - United Kingdom

Presenter
Xanya Sofra Ph.d, Ph.d
science@iellios.com - United Kingdom

#8271

Skin Rejuvenation with Fillers: Fake or Reality?

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Xanya S^{1,1}

¹City University, London, United kingdom

Background/Objectives: For many patients, injectable filling agents offer the promise of facial rejuvenation while offering reduced risks compared with more invasive procedures. While hyaluronic acid fillers are generally accepted as ones that fill in a space, recent clinical observation has documented a persistence of the filling effect that is longer than the biological availability of the filler. On the basis of this clinical observation, it has been assumed that fillers may have a biostimulatory effect on tissue by neocollagenesis. Injectable hyaluronic acid fillers have been recently registered in Europe as agents specific for the improvement of skin quality (Restylane Skinboosters). However, the basic assumption of new collagen and elastin stimulation with fillers has not yet been substantially researched experimentally; neither has it been supported by long-term clinical examples.

Methods: A literature review of dermal fillers from 1995 to present reveals that different dermal fillers depend on the procedural technique, and the agent injected. All dermal fillers have the potential to cause complications as a result of volume and technique, product formulation and concentration, and insufficient knowledge of facial anatomy. The majority of adverse reactions are mild and transient, such as bruising and trauma-related edema. Serious adverse events are rare but present.

Results: One of the underreported side effects of cosmetic injections is vascular occlusion. This condition can be identified by the pain on the injection spot, as well as in areas distant from the injection site. Blanching, white, dusky or pale skin may also be signs of a reduction in blood supply as a result of the cosmetic injection. Other side effects of fillers include allergic reactions, erythema, infections, chronic inflammation and granulomas. Rare side effects include intense necrosis and Keratoacanthoma-like reaction after hyaluronic acid injections

Conclusions: When evaluating anti-aging skin rejuvenation it is important to understand the exact role that Collagen and Elastin are playing in delaying aging. These two proteins are vital for skin firmness and texture but, from a molecular biology perspective they cannot give an overall youthful look. Youthfulness depends on the interactions and signalling communications of around 100,000 proteins, as well as in the consistent reduction of toxicity, free radical formation and inflammation. Despite the ambitious projection of fillers as genuine anti-aging and rejuvenation agents, more thorough longitudinal research is necessary before a positive skin stimulation effect is established.

References: Armstrong JR & Ferguson MW (1995). Ontogeny of the skin and the transition from scar-free to scarring phenotype during wound healing in the pouch young of a marsupial, *Monodelphis domestica*. *Dev Biol*; 169(1):242-60. Meire B. P., Nílceo S. M., Karime M. H., Ediléia, B., & Sérgio, T. (2005). A histologic study of adverse effects of different cosmetic skin fillers. *SKINmed: Dermatology for the Clinician*, 4(6), 345-349. Funt, D., & Pavicic, T. (2015). Dermal fillers in aesthetics: an overview of adverse events and treatment approaches. *Plastic and Aesthetic Nursing*, 35(1), 13-32. Meire B. P., Nílceo S. M., Karime M. H., Ediléia, B., & Sérgio, T. (2005). A histologic study of adverse effects of different cosmetic skin fillers. *SKINmed: Dermatology for the Clinician*, 4(6), 345-349. Akkus, E., Iscimen, A., Tasli, L., & Hattat, H. (2006). Paraffinoma and ulcer of the external genitalia after self-injection of vaseline. *Journal of Sexual Medicine*, 3, 170-172. Al-Ansari, A. A., Shamsodini, A., Talib, R. A., Gul, T., & Shokeir, A. A. (2010). Subcutaneous cod liver oil injection for penile augmentation: Review of literature and report of eight cases. *Urology*, 75, 1181-1184. André, P. (2004). Evaluation of the safety of a non-animal stabilized hyaluronic acid (NASHA-Q-medical Sweden) in European countries: A retrospective study from 1997 to 2001. *Journal of the European Academy of Dermatology and Venereology*, 18, 422-425. Bassetto, F., Turra, G., Salmasso, R., Lancerotto, L., & Del Vecchio, D. A. (2013). Autologous injectable dermis: A clinical and histological study. *Plastic & Reconstructive Surgery*, 131, 589e-596e. Bergeret-Galley, C., Latouche, X., & Illouz, Y. G. (2001). The value of a new filler material in corrective and cosmetic surgery. *DermaLive and DermaDeep. Aesthetic Plastic Surgery*, 25, 249-255. Blanco Souza, T. A. Colomé, L. M., Bender, E. A., & Lemperle, G. Brazilian consensus recommendation on the use of polymethylmethacrylate filler in facial and corporal aesthetics. *Aesthetic Plastic Surgery* 2018 Jun 5. doi: <https://doi.org/10.1007/s00266-018-1167-1>. [Epub ahead of print] Calvo, M., Tornero, P., De Barrio, M., Mínguez, G., Infante, S., Herrero, T., & Baeza, M. L. (2007). Erythema multiforme due to hyaluronic acid (go-on). *Journal of Investigative Allergology and Clinical Immunology*, 17, 127-128. Cheng, N. X., Wang, Y. L., Wang, J. H., Zhang, X. M., & Zhong, H. (2002). Complications of breast augmentation with injected hydrophilic polyacrylamide gel. *Aesthetic Plastic Surgery*, 26, 375-382. Choi, H. J. (2014). Pseudocyst of the neck after facial augmentation with liquid silicone injection. *Journal of Craniofacial Surgery*, 25, e474-e475. Cohen, S. R., Berner, C. F., Busso, M., Gleason, M. C., Hamilton, D., Holmes, R. E., ... Vecchione, T. R. (2006). ArteFill: A long-lasting injectable wrinkle filler material - Summary of the U.S. Food and Drug Administration trials and a progress report on 4- to 5-year outcomes. *Plastic and Reconstructive Surgery*, 118(Suppl. 3), S64-S76. Cohen, J. C., Reischer, W., Malone, M., & Sulica, L. (2013). Severe systemic reaction from calcium hydroxylapatite vocal fold filler. *Laryngoscope*, 123, 2237-2239. Conejo-Mir, J. S., Sanz Guirado, S., & Angel Muñoz, M. (2006). Adverse granulomatous reaction to Artecoll treated by intralesional 5-fluorouracil and triamcinolone injections. *Dermatologic Surgery*, 32, 1079-1081. Damrose, E. J. (2008). Radiographic properties of injected calcium hydroxylapatite: Potential false positive findings on positron emission tomography. *Journal of Laryngology and Otology*, 122, 1394-1396. Dansereau, A., Hamilton, D., Kavoumi, A., Neuhaus-Lorenz, C., Pollack, S., Richards, R., ... Bencheitrit, A. (2008). A report on the safety of and satisfaction with particle-based fillers, specifically polymethylmethacrylate microspheres suspended in collagen. *Cosmetic Dermatology*, 21, 151-156. De Melo, F., & Marijnissen-Hofsté, J. (2012). Investigation of physical properties of a polycaprolactone dermal filler when mixed with lidocaine and lidocaine/epinephrine. *Dermatological Therapy (Heidelberg)*, 2, 13. Gamo, R., Pinedo, F., Vicente, J., Naz, E., Calzado, L., Ruiz-Genao, D., ... López-Esteban, J. L. (2008). Keratoacanthoma-like reaction after a hyaluronic acid and acrylic hydrogel cosmetic filler. *Dermatologic Surgery*, 34, 954-959. Gleeson, C. M., Lucas, S., Langrish, C. J., & Barlow, R. J. (2011). Acute fatal fat tissue embolism after autologous fat transfer in a patient with lupus profundus. *Dermatologic Surgery*, 37, 111-115. Goldan, O., Georgio, I., Grabov-Nardinii, G., Regeve, E., Tessone, A., Liran, A., ... Winkler, E. (2007). Early and late complications after a nonabsorbable hydrogel polymer injection: A series of 14 patients and novel management. *Dermatologic Surgery*, 33(Suppl. 2), S199-S206. González-Vela, M. C., Armesto, S., González-López, M. A., Fernández-Llaca, J. H., & Val-Bernal, J. F. (2008). Perioral granulomatous reaction to Dermalive. *Dermatologic Surgery*, 34, 986-988. Haneke, E. (2009). Risks of permanent fillers. *Expert Reviews in Dermatology*, 4, 271-283. Haneke, E. (2014). Adverse effects of fillers and their histopathology. *Facial Plastic Surgery*, 30, 599-614. Jones, D. H., Carruthers, A., Fitzgerald, R., Sarantopoulos, G. P., & Binder, S. (2007). Late-appearing abscesses after injections of nonabsorbable hydrogel polymer for HIV-associated facial lipodystrophy. *Dermatologic Surgery*, 33(Suppl. 2), S193-S198. Kalantar-Hormozi, A., Mozafari, N., & Rasti, M. (2008). Adverse effects after use of polyacrylamide gel as a facial soft tissue filler. *Aesthetic Surgery Journal*, 28, 139-142. Kamouna, B., Kazandjieva, J., Balabanova, M., Dourmishev, L., Negentsova, Z., Etugov, D., ... Haneke, E. (2014). Oil soluble vitamins: illegal use for lip augmentation. *Facial Plastic Surgery*, 30, 635-643. Lupton, J. R., & Alster, T. S. (2002). Cutaneous hypersensitivity reaction to injectable hyaluronic acid gel. *Dermatologic Surgery*, 26, 135-137. Malik, S., Mehta, P., Adesanya, O., & Ahluwalia, H. S. (2013). Migrated periocular filler masquerading as arteriovenous malformation: A diagnostic and therapeutic dilemma. *Ophthalmologic Plastic and Reconstructive Surgery*, 29, e18-e20. Marmur, E. S., Al Quran, H., De Sa Eap, A. P., & Yoo, J. A. (2009). A five-patient satisfaction pilot study of calcium hydroxylapatite injection for treatment of aging hands. *Dermatologic Surgery*, 35, 1978-1986. Massone, C., Horn, M., Kerl, H., Ambros-Rudolph, C. M., Brunasso, A. M. G., & Cerroni, L. (2009). Foreign body granuloma due to Matrigel injection for cosmetic purposes. *American Journal of Dermatopathology*, 31, 197-199. Persichetti, P., Palazzolo, D., Tenna, S., Poccia, I., Abbruzzese, F., & Trombetta, M. (2013). Dermal filler complications from unknown biomaterials: Identification by attenuated total reflectance spectroscopy. *Plastic and Reconstructive Surgery*, 131, 597e-603e. Rodrigues-Barata, A. R., & Camacho-Martínez, F. M. (2013). Undesirable effects after treatment with dermal fillers. *Journal of Drugs in Dermatology*, 12, e59-e62. Talbot, S. G., Parrett, B. M., & Yaremchuk, M. J. (2010). Sepsis after autologous fat grafting. *Plastic and Reconstructive Surgery*, 126, 162e-164e. Taupin, A., Labbé, D., Nicolas, J., Debout, C., & Benateau, H. (2010). Lipofilling and weight gain. Case report and review of the literature. *Annales de Chirurgie Plastique et Esthétique*, 55, 238-242. Yang, J.-H., Lee, S.-L., Won, C.-H., Chang, S.-E., Lee, M.-W., Choi, J.-H., & Moon, K.-C. (2012). Foreign body granuloma caused by hyaluronic acid/dextranomer microsphere filler injection. *International Journal of Dermatology*, 51, 1517-1518. Zimmermann, U. S., & Clerici, T. J. (2004). The histological aspect of filler complications. *Seminars in Cutaneous Medicine and Surgery*, 23, 24-250.

Submitter
Sofra Xanya
science@iellios.com - United Kingdom

Presenter
Sofra Xanya Ph.d, Ph.d
science@iellios.com - United Kingdom

#8272

The Importance of Longitudinal Studies in Skin Repair and Hair Growth

52 - Hair restoration

Sofra X^{1,2}

¹City University, London, United kingdom

²The New School for Social Research, New york city, United states

Background/Objectives: We present a thorough literature review on the reported and actual statistical significance of laser and radiofrequency studies that is often contradictory, on both skin repair and hair growth. Some RF and laser studies postulate short-term improvement on skin repair, and substantial results on hair health. However, there are underreported, effects reversal or reoccurrence or certain skin disorders such as pigmentation which generally reoccur following laser or RF treatments. A main issue pertaining to such technologies is the results of inflammation. Laser and RF companies claim reduction of inflammation. Yet, a large body of research demonstrates significant inflammation increase after trauma-based procedures. A diligent evaluation of other methods and techniques is also conducted based on research and clinical studies presented, with inflammation being the centrepiece.

Methods: In our randomized, double-blind longitudinal clinical research, we followed 22 clinical cases treated with a novel resonance anti-inflammatory technology for up to 4 years.

Results: All subjects evidenced irreversible skin repair and hair growth. The 12 subjects who participated in the long-term study of facial rejuvenation presented sustained visible results after four years. Most subjects denied consent to publicize their pictures. Results on hair were evident after two weeks and were also clearly visible in all subjects. Hair was instantly stimulated, all hair standing up indicating a fast response to the resonant signals of the treatment. Hair growth was substantial after four months. The hair grew faster and it was visibly thicker. The two subjects treated for Keloids, showed significant improvement after six treatments with no reoccurrence of the keloid scar during the observed period of three years following the treatments. The number of treatments required for both hair growth and skin repair depended on the chronicity and severity of skin condition, and the extent of hair loss, rather than age. More chronic, difficult cases required more treatments irrespective of whether the subject was younger or older.

Conclusions: Our clinical study results on age-independent skin repair and hair growth advocated for the importance of anti-inflammatory techniques to counterbalance immune insufficiency, age-accumulated oxidative stress, and disrupted cellular communications. In evaluating the positive effect of energy devices, one must consider the fact that the presence of inflammation after a traumatic procedure gives a false sense of rejuvenation as the prolonged swelling masks fine lines and wrinkles. Contrary to the general belief that inflammation is a necessary phase of skin repair, in fact, the immune cells that regulate the inflammatory phase to remove invading pathogens are not necessary for skin repair. Instead, inflammation may be responsible for scar formation and may often prevent wound closure. Importantly, there is substantial evidence that the main cause of ageing and hair loss is inflammation.

References: Akaishi, S., Koike, S., Dohi, T., Kobe, K., Hyakusoku, H., & Ogawa, R. (2012). Nd: YAG laser treatment of keloids and hypertrophic scars. *Eplasty*, 12. Araque A, Navarrete, M (2010). Glial cells in neuronal network function. *Philos Trans R Soc Lond B Biol Sci*. Aug 12; 365(1551): 2375–2381. doi: 10.1098/rstb.2009.0313 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2894949/> Balch WE, Dunphy WG, Brallé WA, Rothman JE (1984): Reconstitution of the transport of protein between successive compartments of the Golgi measured by the coupled incorporation of N-acetylglucosamine. *Cell*; 39:405–416. <https://www.ncbi.nlm.nih.gov/pubmed/6498939> DOI: 10.1016/0092-8674(84)90019-9 Baylis, D., Bartlett, D. B., Patel, H. P., & Roberts, H. C. (2013). Understanding how we age: insights into inflammaging. *Longevity & healthspan*, 2, 1–8. Chaban V, Cho T, Reid C. B., Norris K, C (2013). Physically disconnected non-diffusible cell-to-cell communication between neuroblastoma SH-SY5Y and DRG primary sensory neurons. *American Journal of Translational Research*; 5(1): 69–79. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3560476/> PMID: 23390567 Chen, G., Hou, Z., Gulbranson, D. R., & Thomson, J. A. (2010). Actin-myosin contractility is responsible for the reduced viability of dissociated human embryonic stem cells. *Cell stem cell*, 7(2), 240–248. Chow, M. T., Möller, A., & Smyth, M. J. (2012, February). Inflammation and immune surveillance in cancer. In *Seminars in cancer biology* (Vol. 22, No. 1, pp. 23–32). Academic Press. De Heredia, F. P., Gómez-Martínez, S., & Marcos, A. (2012). Obesity, inflammation and the immune system. *Proceedings of the Nutrition Society*, 71(2), 332–338. del Pino Emilia, M., Rosado, R.H., Azuela, A., Graciela, M.G., Argüelles, D., Rodríguez, C. and Rosado, G.M., (2006). Effect of controlled volumetric tissue heating with radiofrequency on cellulite and the subcutaneous tissue of the buttocks and thighs. *Journal of drugs in dermatology*; JDD, 5(8), pp.714–722. PMID: 16989185 El Sayed, M. H., Abdallah, M. A., Aly, D. G., & Khater, N. H. (2016). Association of metabolic syndrome with female pattern hair loss in women: a case–control study. *International journal of dermatology*, 55(10), 1131–1137. Franco, W., Kothare, A., and Goldberg, D.J., (2009). Controlled volumetric heating of subcutaneous adipose tissue using a novel radiofrequency technology. *Lasers in Surgery and Medicine: The Official Journal of the American Society for Laser Medicine and Surgery*, 41(10), pp.745–750. <https://doi.org/10.1002/lsm.20876> Derrick, C. D., Shridharani, S. M., & Broyles, J. M. (2015). The safety and efficacy of cryolipolysis: a systematic review of available literature. *Aesthetic Surgery Journal*, 35(7), 830–836. Duschler, D., Rennert, R. C., Januszyk, M., Anghel, E., Maan, Z. N., Whittam, A. J., ... & Gurtner, G. C. (2014). Aging disrupts cell subpopulation dynamics and diminishes the function of mesenchymal stem cells. *Scientific reports*, 4(1), 7144. Faiella, W., & Atoui, R. (2016). Therapeutic use of stem cells for cardiovascular disease. *Clinical and translational medicine*, 5(1), 1–8. Franco, W., Kothare, A., and Goldberg, D.J., (2009). Controlled volumetric heating of subcutaneous adipose tissue using a novel radiofrequency technology. *Lasers in Surgery and Medicine: The Official Journal of the American Society for Laser Medicine and Surgery*, 41(10), pp.745–750. <https://doi.org/10.1002/lsm.20876> Franco, W., Kothare, A., Ronan, S.J., Grekin, R.C. and McCalmont, T.H., (2010). Hyperthermic injury to adipocyte cells by selective heating of subcutaneous fat with a novel radiofrequency device: feasibility studies. *Lasers in surgery and medicine*, 42(5), pp.361–370. <https://doi.org/10.1002/lsm.20925> Franceschi, C., Garagnani, P., Vitale, G., Capri, M., & Salvioli, S. (2017). Inflammaging and 'Garb-aging'. *Trends in Endocrinology & Metabolism*, 28(3), 199–212. Franceschi, C., Garagnani, P., Parini, P., Giuliani, C., & Santoro, A. (2018). Inflammaging: a new immune–metabolic viewpoint for age-related diseases. *Nature Reviews Endocrinology*, 14(10), 576–590. Freeman, G.J., Long, A.J., Iwai, Y., Bourque, K., Chernova, T., Nishimura, H., Fitz, L.J., Malenkovich, N., Okazaki, T., Byrne, M.C., Horton, H.F., Fouser, L., Carter, L., Ling, V., Bowman, M.R., Carreno, B.M., Collins, M., Wood, C.R. & Honjo, T. (2000). Engagement of the PD-1 immunoinhibitory receptor by a novel B7 family member leads to negative regulation of lymphocyte activation. *J Exp Med*, 192(7), 1027–1034. <https://www.ncbi.nlm.nih.gov/pubmed/11015443> DOI: 10.1084/jem.192.7.1027 Fujita, J., Crane, A. M., Souza, M. K., Dejesse, M., Kyba, M., Flavell, R. A., ... & Zwaka, T. P. (2008). Caspase activity mediates the differentiation of embryonic stem cells. *Cell stem cell*, 2(6), 595–601. Fülöp, T., Larbi, A., & Witkowski, J. M. (2019). Human inflammaging. *Gerontology*, 65(5), 495–504. Gupta, S., & Kalra, A. (2002). Efficacy and safety of intraliesional 5-fluorouracil in the treatment of keloids. *Dermatology*, 204(2), 130–132. Gurdin J., Yamanaka S. (2012). The Nobel Prize in Physiology or Medicine 2012. *NobelPrize.org*. Nobel Prize Outreach AB 2024. Wed. 28 Feb 2024. <https://www.nobelprize.org/prizes/medicine/2012/summary> Hata Y, Slaughter CA, Südhof TC (1993). Synaptic vesicle fusion complex contains unc-18 homologue bound to syntaxin. *Nature*; 366:347–351. <https://www.ncbi.nlm.nih.gov/pubmed/8247129> DOI: 10.1038/362318a0 Haworth, R., & Sharpe, M. (2021). Accept or reject: the role of immune tolerance in the development of stem cell therapies and possible future approaches. *Toxicologic Pathology*, 49(7), 1308–1316. Hodi, F.S., Mihm, M.C., Soiffer, R.J., Haluska, F.G., Butler, M., Seiden, M.V., Davis, T., Henry-Spires, R., MacRae, S., Willman, A., Padera, R., Jakitsch, M.T., Shankar, S., Chen, T.C., Korman, A., Allison, J.P., & Dranoff, G. (2003). Biologic activity of cytotoxic T lymphocyte-associated antigen 4 antibody blockade in previously vaccinated metastatic melanoma and ovarian carcinoma patients. *Proc Natl Acad Sci USA*, 100(8), 4712–4717. <https://www.ncbi.nlm.nih.gov/pubmed/12628289> DOI: 10.1073/pnas.0830997100 Hsuan, Y. C. Y., Lin, C. H., Chang, C. P., & Lin, M. T. (2016). Mesenchymal stem cell-based treatments for stroke, neural trauma, and heat stroke. *Brain and behavior*, 6(10), e00526. Ishida, Y., Agata, Y., Shibahara, K., & Honjo, T. (1992). Induced expression of PD-1, a novel member of the immunoglobulin gene superfamily, upon programmed cell death. *EMBO J*, 11(11), 3887–3895. <https://www.ncbi.nlm.nih.gov/pubmed/1396582> PMID: 1396582PMCID: PMC556898 Iwai, Y., Terawaki, S., & Honjo, T. (2005). PD-1 blockade inhibits hematogenous spread of poorly immunogenic tumor cells by enhanced recruitment of effector T cells. *Int Immunol*, 17(2), 133–144. <https://www.ncbi.nlm.nih.gov/pubmed/15611321> DOI: 10.1093/intimm/dxh194 Jallian, H. R., Avram, M. M., Garibyan, L., Mihm, M. C., & Anderson, R. R. (2014). Paradoxical adipose hyperplasia after cryolipolysis. *JAMA dermatology*, 150(3), 317–319. James E. Rothman, Randy W. Schekman and Thomas C. Südhof. Nobel Prize in Physiology or Medicine (2013). Machinery regulating vesicle traffic, a major transport system in our cells. <https://www.nobelprize.org/prizes/medicine/2013/summary/> Jaworsky C, Kligman AM, Murphy GF (1992). Characterization of inflammatory infiltrates in male pattern alopecia: implications for pathogenesis. *Br J Dermatol*; 127(3):239–246. doi: 10.1111/j.1365-2133.1992.tb00121.x1390168 Kaiser CA, Schekman R (1990): Distinct sets of SEC genes govern transport vesicle formation and fusion early in the secretory pathway. *Cell*; 61:723–733. <https://www.ncbi.nlm.nih.gov/pubmed/2188733> DOI: 10.1016/0092-8674(90)90483-u Kapoor, R., Shome, D. and Ranjan, A., (2017). Use of a novel combined radiofrequency and ultrasound device for lipolysis, skin tightening and cellulite treatment. *Journal of Cosmetic and Laser Therapy*, 19(5), pp.266–274. <https://doi.org/10.1080/14764172.2017.1303169> Kandel, E. R., & Squire, L. R. (2000). Neuroscience: Breaking down scientific barriers to the study of brain and mind. *Science*, 290(5494), 1113–1120. Khacho, M., Clark, A., Svoboda, D. S., Azzi, J. G., MacLaurin, J. G., Meghaizel, C., ... & Slack, R. S. (2016). Mitochondrial dynamics impacts stem cell identity and fate decisions by regulating a nuclear transcriptional program. *Cell stem cell*, 19(2), 232–247. Kincaid, C. M., Ben Romdhane, N., Csuka, E. A., Sharma, A. N., Juhasz, M., & Mesinkovska, N. A. (2023). Is There a Role for Radiofrequency Devices in Hair? *Skin Appendage Disorders*, 9(3), 169–178. Koike, S., Akaishi, S., Nagashima, Y., Dohi, T., Hyakusoku, H., & Ogawa, R. (2014). Nd: YAG laser treatment for keloids and hypertrophic scars: an analysis of 102 cases. *Plastic and Reconstructive Surgery–Global Open*, 2(12), e272. Leach, D. R., Krummel, M. F., & Allison, J. P. (1996). Enhancement of antitumor immunity by CTLA-4 blockade. *Science*, 271(5256), 1734–1736. <https://www.ncbi.nlm.nih.gov/pubmed/8596936> DOI: 10.1126/science.271.5256.1734 Legein, B., Temmerman, L., Biessen, E. A., & Lutgens, E. (2013). Inflammation and immune system interactions in atherosclerosis. *Cellular and Molecular Life Sciences*, 70, 3847–3869. Leszczynski, R., da Silva, C. A., Pinto, A. C. P. N., Kuczyński, U., & da Silva, E. M. (2022). Laser therapy for treating hypertrophic and keloid scars. *Cochrane Database of Systematic Reviews*, (9). López-Otín, C., Blasco, M. A., Partridge, L., Serrano, M., & Kroemer, G. (2013). The hallmarks of aging. *Cell*, 153(6), 1194–1217. Ma, R., Chen, L., Hu, N., Caplan, S., & Hu, G. (2023). Cilia and extracellular vesicles in brain development and disease. *Biological Psychiatry*. Faiella, W., & Atoui, R. (2016). Therapeutic use of stem cells for cardiovascular disease. *Clinical and translational medicine*, 5(1), 1–8. Mandal, S., Lindgren, A. G., Srivastava, A. S., Clark, A. T., & Banerjee, U. (2011). Mitochondrial function controls the proliferation and early differentiation potential of embryonic stem cells. *Stem cells*, 29(3), 486–495. Martínez-Jacobo L, Ancer-Arellano CI, Ortiz-Lopez R, et al (2018). Evaluation of the expression of genes associated with inflammation and apoptosis in androgenetic alopecia by targeted RNA-seq. *Skin Appendage Disord*; 4(4):268–273. doi: 10.1159/00048453030410894 Morinaga, H., Mohri, Y., Grachtchouk, M., Asakawa, K., Matsumura, H., Oshima, M., ... & Nishimura, E. K. (2021). Obesity accelerates hair thinning by stem cell-centric converging mechanisms. *Nature*, 595(7866), 266–271. Nikolis, A., & Enright, K. M. (2021). A multicenter evaluation of paradoxical adipose hyperplasia following cryolipolysis for fat reduction and body contouring: a review of 8658 cycles in 2114 patients. *Aesthetic Surgery Journal*, 41(8), 932–941. Nishimura, H., Nose, M., Hiai, H., Minato, N., & Honjo, T. (1999). Development of Lupus-like Autoimmune Diseases by Disruption of the PD-1 gene encoding an ITIM motif-carrying immunoreceptor. *Immunity*, 11, 141–151. Novick P, Schekman R (1979): Secretion and cell-surface growth are blocked in a temperature-sensitive mutant of *Saccharomyces cerevisiae*. *Proc Natl Acad Sci USA* 1979; 76:1858–1862. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC383491/> doi: 10.1073/pnas.76.4.1858 Ojeh, N., Bharatha, A., Gaur, U., & Forde, A. L. (2020). Keloids: current and emerging therapies. *Scars, burns & healing*, 6, 205951310940499. Oschman J. L. (2005). Energy and the healing response, *Journal of Bodywork and Movement Therapies* 3–15. doi: 10.1016/s1360-8592(03)00092-5. URL [https://dx.doi.org/10.1016/s1360-8592\(03\)00092-5](https://dx.doi.org/10.1016/s1360-8592(03)00092-5) Patel, K. V., Farrant, P., Sanderson, J. D., & Irving, P. M. (2013). Hair loss in patients with inflammatory bowel disease. *Inflammatory Bowel Diseases*, 19(8), 1753–1763. Paul, M. and Mulholland, R.S., (2009). A new approach for adipose tissue treatment and body contouring using radiofrequency-assisted liposuction. *Aesthetic plastic surgery*, 33(5), pp.687–694. DOI 10.1007/s00266-009-9342-z Park, J. S., Kim, H. Y., Kim, H. W., Chae, G. M., Oh, H. T., Park, J. Y., ... & Kwak, S. J. (2005). Increased caveolin-1, a cause for the declined adipogenic potential of senescent human mesenchymal stem cells. *Mechanisms of ageing and development*, 126(5), 551–559. Peng, Y., Ma, A., Xiao, Z., Hao, J., Feng, R., Wang, C., ... & Zhao, T. (2023). Technical specifications for ethics review of human stem cell research. *Cell Proliferation*, 13556. Perin MS, Fried VA, Mignery GA, Jahn R, Südhof TC (1990): Phospholipid binding by a synaptic vesicle protein homologous to the regulatory region of protein kinase C. *Nature*; 345:260–263. <https://www.ncbi.nlm.nih.gov/pubmed/2333096> DOI: 10.1038/345260a0 Peyravian, N., Deo, S., Daunert, S., & Jimenez, J. J. (2020). The inflammatory aspect of male and female pattern hair loss. *Journal of inflammation research*, 879–881. Rajan, Varaguna & Murray, Rachael. (2008). The duplicitous nature of inflammation in wound repair. *Wound Pract Res*. 16, 122–129. Saloman, J. L., Cohen, J. A., & Kaplan, D. H. (2020). Intimate neuro-immune interactions: breaking barriers between systems to make meaningful progress. *Current Opinion in Neurobiology*, 62, 60–67. Santoro, A., Bientinesi, E., & Monti, D. (2021). Immunosenescence and inflammaging in the aging process: age-related diseases or longevity?. *Ageing Research Reviews*, 71, 1042252. Seo, B. J., Yoon, S. H., & Do, J. T. (2018). Mitochondrial dynamics in stem cells and differentiation. *International journal of molecular sciences*, 19(12), 3893. Smolarczyk, K., Meczekalski, B., Rudnicka, E., Suchta, K., & Szeliga, A. (2024). Association of Obesity and Bariatric Surgery on Hair Health. *Medicina*, 60(2), 325.. Snow, D. M., Lemmon, V., Carrino, D. A., Caplan, A. I., & Silver, J. (1990). Sulfated proteoglycans in astroglial barriers inhibit neurite outgrowth in vitro. *Experimental neurology*, 109(1), 111–130. Sofra, X. (2020) Gain without Pain: Beyond Sport Effortless Exercise Solutions. *Journal of Aesthetic Nursing*, 9, 202–210. <https://doi.org/10.12968/joan.2020.9.5.202> [Citation Time(s):1] Sofra, X. and Lampe, N. (2020) Empowering the Woman: A Comprehensive Model of Sexual Anti-Ageing. *Journal of Aesthetic Nursing*, 9, 118–127. <https://doi.org/10.12968/joan.2020.9.3.118> [Citation Time(s):1] Sofra, X. (2020) How to get rid of visceral fat: a randomised double-blind clinical trial. *Journal of Aesthetic Nursing*, 9(7): 268–275.DOI: <https://doi.org/10.12968/joan.2020.9.7.268> Sofra, X. (2020) Gain without pain: beyond sport effortless exercise solutions. *Journal of Aesthetic Nursing*, 9(5): 202–210.DOI: <https://doi.org/10.12968/joan.2020.9.5.202> Sofra X. (2020) The Importance of Systemic Balance in Safeguarding Health: A Randomized Double-Blind Clinical Trial on VLDL, Triglycerides, Free T3,Leptin, Ghrelin, Cortisol and Visceral Adipose Tissue. *Health*, 12(8).DOI: <https://doi.org/10.4236/health.2020.128078> Sofra, X., & Lampe, N. (2020). Technological Advances in Accelerated Wound Repair and Regeneration. *Health*, 12(7), 717–737. DOI: 10.4236/health.2020.127053 Sofra, X., & Lampe, N. (2020). A Randomized Longitudinal Double-Blind Clinical Trial on Long-Term Neuropathic Symptomatology Relief & Pain Analgesia. *Health*, 12(07), 738. <http://creativecommons.org/licenses/by/4.0/> Sofra, X., Badami, S (2020). Adverse Effects of Sedentary Lifestyles: Inflammation, and High-Glucose Induced Oxidative Stress-A Double Blind Randomized Clinical Trial on Diabetic and Prediabetic Patients. *Health*, 12(08): 1029. Article ID:102260, 20 pages DOI: <https://doi.org/10.4236/health.2020.128076> Sofra, X., Lampe, N. A Randomized Longitudinal Double-Blind Clinical Trial on Long-Term Neuropathic Symptomatology Relief & Pain Analgesia. *Health*, 2020, 12(07): 738. ID:101363,12 pages DOI: 10.4236/health.2020.127054 Sofra, X., Badami, S. (2020) A Review of COVID-19 associated factors: CRP, Creatinine, Bilirubin, VLDL, HDL, Triglycerides, Cortisol and Thyroid Function. *J Endo Metabol Res*, 1(2): 1–17. https://www.maplespub.com/webroot/files/A-Review-of-COVID19-associated-factors-CRP-Creatinine-Bilirubin-VLDL-HDL-Triglycerides-Cortisol-and-Thyroid-Function_1601046593.pdf Sofra, X. Dynamics of Female Sexuality: Hidden Emotional Issues. *Health*, (2020), 12(6): 694–708.DOI: 10.4236/health.2020.126051 Sofra, X., Lampe, N. (2020) Empowering the woman: a comprehensive model of sexual anti-ageing. *Journal of Aesthetic Nursing*, 9(3): 118–127.DOI: <https://doi.org/10.12968/joan.2020.9.3.118> Sofra, X. The Affinity between Obesity and COVID-19. *J Endo Metabol Res*, (2020), 1(2): 1–13. https://maplespub.com/webroot/files/The-Affinity-between-Obesity-and-COVID-19_1602748373.pdf Sofra X, Badami S. A Review of COVID19 associated factors: CRP, Creatinine, Bilirubin, VLDL, HDL,Triglycerides, Cortisol, and Thyroid Function. *J Endo Metabol Res.* (2020), 1(2):1–17. <https://maplespub.com/article/A-Re-view-of-COVID19-associated-factors-CRP-Creatinine-Bilirubin-VLDL-HDL-Triglycerides-Cortisol-and-Thyroid-Function> Sofra X (2022) Liver Repair of NAFLD patients, Following Effortless Exercise and the Possible Involvement of Endogenous Stem Cells. *Journal of Diabetes, Metabolic Disorders and Control* Sollner T, Whiteheart W, Brunner M, Erdjument-Bromage H, Geromanos S, Tempst P, Rothman JE(1993): SNAP receptor implicated in vesicle targeting and fusion. *Nature* 1993; 362:318–324. <https://www.ncbi.nlm.nih.gov/pubmed/8455717> Stroumza, N., Gauthier, N., Senet, P., Moguelet, P., Nail Barthelemy, R., & Atlan, M. (2018). Paradoxical adipose hypertrophy (PAH) after cryolipolysis. *Aesthetic Surgery Journal*, 38(4), 411–417. Takahashi, K., & Yamanaka, S. (2006). Induction of pluripotent stem cells from mouse embryonic and adult fibroblast cultures by defined factors. *cell*, 126(4), 663–676. Touni, H., & Best, T. M. (2003). The inflammatory response: friend or enemy for muscle injury?. *British journal of sports medicine*, 37(4), 284–286 Turinetto, V., Vitale, E., & Giachino, C. (2016). Senescence in human mesenchymal stem cells: functional changes and implications in stem cell-based therapy. *International journal of molecular sciences*, 17(7), 1164. Van Deursen, J. M. (2014). The role of senescent cells in ageing. *Nature*, 509(7501), 439–446. Wang, X., Li, T., Cui, T., Yu, D., Liu, C., Jiang, L., ... & Hu, B. (2018). Human embryonic stem cells contribute to embryonic and extraembryonic lineages in mouse embryos upon inhibition of apoptosis. *Cell research*, 28(1), 126–129. Wessler, I., & Kirkpatrick, C. (2008). Acetylcholine beyond neurons: the non-neuronal cholinergic system in humans. *British journal of pharmacology*, 154(8), 1558–1571. Wilson P, Ralston. Electron-Gated Ion Channels: With Amplification by N/3 Inversion Resonance. Institution of Engineering and Technology, 2005 - Science - 190 pages https://books.google.com.hk/books/about/Electron_Gated_Ion_Channels.html?id=5zaAkQhKZPOC&source=kp_cover&redir_esc=y Yao, X., Li, H., & Leng, S. X. (2011). Inflammation and immune system alterations in frailty. *Clinics in geriatric medicine*, 27(1), 79–87. Yu, A. J., Luo, Y. J., Xu, X. G., Bao, L. D., Tian, T., Li, Z. X., ... & Li, Y. H. (2018). A pilot split-scalp study of combined fractional radiofrequency microneedling and 5% topical minoxidil in treating male pattern hair loss. *Clinical and Experimental Dermatology*, 43(7), 775–781. Zhang, W., Fan, M., Wang, C., Mahawar, K., Parmar, C., Chen, W., ... & Global Bariatric Research Collaborative. (2021). Hair loss after metabolic and bariatric surgery: a systematic review and meta-analysis. *Obesity Surgery*, 31, 2649–2659 Zhu, L., & Skoutch, A. I. (2001). Coordinating cell proliferation and differentiation. *Current opinion in genetics & development*, 11(1), 91–97.

Submitter
Sofra Xanya
science@iellios.com - United Kingdom

Presenter
Sofra Xanya Phd, Ph.d
science@iellios.com - United Kingdom

#8273

How to Suppress Hunger and Avoid Weight Gain Rebound after Energy Devices' Body Sculpting

50 - Body contouring & skin tightening

Sofra X^{1,2}

¹City University, London, United kingdom

²New School for Social Research, New york city, United states

Background/Objectives: We conducted a literature review to identify the main disadvantage of most body sculpting technologies. The main problem is that results rebound due to an age-related metabolic decline and a general inability to control cravings which is directly connected to imbalanced hormones. Instead of focusing on how we can temporarily remove fat, that will be soon regained bringing our patients back to square one, we should focus on how we can adjust systemic imbalances that can permanently change our bodies through health enhancement.

Methods: Younger bodies can easily detoxify the fat contents released into the bloodstream after lasers and RF treatments. But it's the older individuals who are faced with inevitable weight gain due to hormonal decline. Energy devices can overwhelm the compromised lymphatic systems of older patients causing lipid accumulation and eventual obstruction of blood flow within the arteries. Toxicity is positively correlated with hunger increase, so the more toxic you are the more hungry you are. Both diagnosed and undiagnosed hypothyroidism lead to substantial weight gain. Perpetual fatigue follows the accumulation of white adipose tissue that serves as fat storage, and an inadequate supply of brown fat to generate energy. Surrendering to hunger cravings eventually builds up a diabetic status which then increases hunger due to an insulin signalling dysfunction that prevents the body from using glucose for energy.

Results: Both previously abnormally high fasting and postprandial (PP) glucose decreased considerably in all 21 diabetic subjects (100%). Nine of the diabetic subjects (42.85%) manifested normal fasting glucose levels after 20 treatments, while the fasting glucose of the remaining twelve diabetic subjects (57.2%) dropped down to the prediabetic level. Ten of the diabetic subjects (47.6%) manifested normal PP insulin levels, while the PP insulin of the remaining eleven diabetic subjects (52.38%) dropped to the prediabetic level after the 20 treatments. Prediabetics had more robust results as expected by their baseline healthier status. Eighteen of prediabetics (90%) manifested both normal fasting and PP insulin levels after the 20 treatments, while the fasting and PP insulin of the remaining two subjects (10%) remained within the prediabetic level. All subjects exhibited a statistically significant increase in muscle mass, normalized T3 levels, decreased visceral and overall fat along with reduced CRP, advocating diminished inflammation. Dyslipidaemia appeared to subside as denoted by suppressed levels of triglycerides contrasted by elevated HDL. The food questionnaires administered revealed that subjects made healthier nutrition choices confirming the subjects' subjective experience of a decrease in cravings and constant hunger

Conclusions: Our findings support and validate the results of previous studies that some mode of exercise is necessary to enhance health status and sustain weight loss without rebound

References: Evaluate the efficacy of several different technologies in terms of results maintenance vs rebound Focus on hunger suppression as a method to sustain weight loss and body-sculpting results Understand the role that metabolism, testosterone, and the ghrelin / leptin balance play on weight gain Investigate combinations of different technologies and the effects of lifestyle and exercise on maintaining weight loss and body sculpting benefits

Submitter
Sofra Xanya
science@iellios.com - United Kingdom

Presenter
Sofra, Ph.d Xanya
science@iellios.com - United Kingdom

#8275

Do Molecular Mechanisms Hold the Secret to Healthy Skin and Anti-aging

51 - Regenerative aesthetics

Sofra, Ph.d X^{1,2}

¹City University, London, United kingdom

²New School for Social Research, new york city, United states

Background/Objectives: In the past 15 years, Nobel winning research has demonstrated how molecular mechanisms can reverse the course of skin disorders, enhance skin health and delay ageing

Methods: Going back in time as whole entities is impossible. However, a detailed scrutiny of molecular mechanisms indicates that in the quantum world of cellular communications, molecular mechanisms go forward and backwards in time, routinely, We looked at 86 articles related to new discoveries on how molecular mechanisms control both age delay and the treatment of several skin disorders

Results: The Nobel Prize in Physiology or Medicine 2018 was awarded for discovering how to inhibit negative immune regulation. In several patients, signs of melanoma disappeared by blocking the CTLA-4 that disengages the T-cell brake allowing the immune system to attack melanoma cells relentlessly. Blocking the PD-1, another protein expressed on the surface of T-cells, has helped treat a number of cancers including renal, lymphoma and melanoma. The Nobel Prize in Physiology or Medicine 2017 was awarded the discovery that molecular mechanisms control the circadian rhythm, via two proteins The two proteins, TIM (timeless) and PER (period). Disturbance in molecular circadian rhythms can cause premature ageing as well as a number of skin conditions including psoriasis. The Nobel Prize in Physiology or Medicine 2013 was awarded the discovery of biological machinery regulating vesicle traffic, a major transport system in our cells. Cells with defective transport machinery, give rise to a situation resembling a poorly planned public transport system which ultimately speeds up ageing and the formation of skin disorders which extend to neurological and immunological disorders, including diabetes

Conclusions: The plethora of new research focusing on molecular mechanisms composes a dynamic process of a matrix of signalling controls processes, delivered at specific times. It's an elegant, almost symphonic interaction of cellular circadian clocks, the time dimension intertwined with the multi-dimensional intra- and intercellular signalling network. Identifying and reproducing signalling processes necessary to sustain health and the discrete intervals in which they have to be delivered is the ultimate goal of the new advances in molecular resonance

References

Leach, D. R., Krummel, M. F., & Allison, J. P. (1996). Enhancement of antitumor immunity by CTLA-4 blockade. *Science*, 271(5256), 1734–1736. Kwon, E. D., Hurwitz, A. A., Foster, B. A., Madias, C., Feldhaus, A. L., Greenberg, N. M., Burg, M.B. & Allison, J.P. (1997). Manipulation of T cell costimulatory and inhibitory signals for immunotherapy of prostate cancer. *Proc Natl Acad Sci USA*, 94(15), 8099–8103. Nishimura, H., Nose, M., Hiai, H., Minato, N., & Honjo, T. (1999). Development of Lupus-like Autoimmune Diseases by Disruption of the PD-1 gene encoding an ITIM motif-carrying immunoreceptor. *Immunity*, 11, 141–151. Freeman, G.J., Long, A.J., Iwai, Y., Bourque, K., Chernova, T., Nishimura, H., Fitz, L.J., Malenkovich, N., Okazaki, T., Byrne, M.C., Horton, H.F., Fouser, L., Carter, L., Ling, V., Bowman, M.R., Carreno, B.M., Collins, M., Wood, C.R. & Honjo, T. (2000). Engagement of the PD-1 immunoinhibitory receptor by a novel B7 family member leads to negative regulation of lymphocyte activation. *J Exp Med*, 192(7), 1027–1034. Hodi, F.S., Mihm, M.C., Soiffer, R.J., Haluska, F.G., Butler, M., Seiden, M.V., Davis, T., Henry-Spires, R., MacRae, S., Willman, A., Padera, R., Jaklitsch, M.T., Shankar, S., Chen, T.C., Korman, A., Allison, J.P. & Dranoff, G. (2003). Biologic activity of cytotoxic T lymphocyte-associated antigen 4 antibody blockade in previously vaccinated metastatic melanoma and ovarian carcinoma patients. *Proc Natl Acad Sci USA*, 100(8), 4712–4717. Iwai, Y., Terawaki, S., & Honjo, T. (2005). PD-1 blockade inhibits hematogenous spread of poorly immunogenic tumor cells by enhanced recruitment of effector T cells. *Int Immunol*, 17(2), 133–144. ehling, W.A., Wheeler, D.A., Reddy, P., Konopka, R.J., Kyriacou, C.P., Roshash, M., and Hall, J.C. (1984). P-element transformation with period locus DNA restores rhythmicity to mutant, arrhythmic *Drosophila melanogaster*. *Cell* 39, 369–376. Bargiello, T.A., Jackson, F.R., and Young, M.W. (1984). Restoration of circadian behavioural rhythms by gene transfer in *Drosophila*. *Nature* 312, 752–754. Siwicki, K.K., Eastman, C., Petersen, G., Roshash, M., and Hall, J.C. (1988). Antibodies to the period gene product of *Drosophila* reveal diverse tissue distribution and rhythmic changes in the visual system. *Neuron* 1, 141–150. Hardin, P.E., Hall, J.C., and Roshash, M. (1990). Feedback of the *Drosophila* period gene product on circadian cycling of its messenger RNA levels. *Nature* 343, 536–540. Liu, X., Zwiebel, L.J., Hinton, D., Benzer, S., Hall, J.C., and Roshash, M. (1992). The period gene encodes a predominantly nuclear protein in adult *Drosophila*. *J Neurosci* 12, 2735–2744. Vossahl, L.B., Price, J.L., Sehgal, A., Saez, L., and Young, M.W. (1994). Block in nuclear localization of period protein by a second clock mutation, timeless. *Science* 263, 1606–1609. Price, J.L., Blau, J., Rothenfluh, A., Abodeely, M., Kloss, B., and Young, M.W. (1998). double-time is a novel *Drosophila* clock gene that regulates PERIOD protein accumulation. *Cell* 94, 83–95. Novick P, Schekman R: Secretion and cell-surface growth are blocked in a temperature-sensitive mutant of *Saccharomyces cerevisiae*. *Proc Natl Acad Sci USA* 1979; 76:1858-1862. Balch WE, Dunphy WG, Braell WA, Rothman JE: Reconstitution of the transport of protein between successive compartments of the Golgi measured by the coupled incorporation of N-acetylglucosamine. *Cell* 1984; 39:405-416. Kaiser CA, Schekman R: Distinct sets of SEC genes govern transport vesicle formation and fusion early in the secretory pathway. *Cell* 1990; 61:723-733. Perin MS, Fried VA, Mignery GA, Jahn R, Südhof TC: Phospholipid binding by a synaptic vesicle protein homologous to the regulatory region of protein kinase C. *Nature* 1990; 345:260-263. Sollner T, Whiteheart W, Brunner M, Erdjument-Bromage H, Geromanos S, Tempst P, Rothman JE: SNAP receptor implicated in vesicle targeting and fusion. *Nature* 1993; 362:318-324. Hata Y, Slaughter CA, Südhof TC: Synaptic vesicle fusion complex contains unc-18 homologue bound to syntaxin. *Nature* 1993; 366:347-351. Wegener AM, Letourneur F, Hoeveler A, Brocker T, Lutton F, Malissen B. The T cell receptor/CD3 complex is composed of at least two autonomous transduction modules. *Cell*. 1992 Jan 10;68(1):83–95. [PubMed] [Google Scholar] Williams AF, Barclay AN. The immunoglobulin superfamily—domains for cell surface recognition. *Annu Rev Immunol*. 1988;6:381–405. [PubMed] [Google Scholar] Yonehara S, Ishii A, Yonehara M. A cell-killing monoclonal antibody (anti-Fas) to a cell surface antigen co-downregulated with the receptor of tumor necrosis factor. *J Exp Med*. 1989 May 1;169(5):1747–1756. [PMC free article] [PubMed] [Google Scholar] Allen RD, Marshall JD, Roths JB, Sidman CL. Differences defined by bone marrow transplantation suggest that lpr and gld are mutations of genes encoding an interacting pair of molecules. *J Exp Med*. 1990 Nov 1;172(5):1367–1375. [PMC free article] [PubMed] [Google Scholar] Ashwell JD, Cunningham RE, Noguchi PD, Hernandez D. Cell growth cycle block of T cell hybridomas upon activation with antigen. *J Exp Med*. 1987 Jan 1;165(1):173–194. [PMC free article] [PubMed] [Google Scholar] Benhamou LE, Cazenave PA, Sarthou P. Anti-immunoglobulins induce death by apoptosis in WEHI-231 B lymphoma cells. *Eur J Immunol*. 1990 Jun;20(6):1405–1407. [PubMed] [Google Scholar] Britten RJ, Graham DE, Neufeld BR. Analysis of repeating DNA sequences by reassociation. *Methods Enzymol*. 1974;29:363–418. [PubMed] [Google Scholar] Cohen JJ, Duke RC. Glucocorticoid activation of a calcium-dependent endonuclease in thymocyte nuclei leads to cell death. *J Immunol*. 1984 Jan;132(1):38–42. [PubMed] [Google Scholar] Cohen PL, Eisenberg RA. Lpr and gld: single gene models of systemic autoimmunity and lymphoproliferative disease. *Annu Rev Immunol*. 1991;9:243–269. [PubMed] [Google Scholar] Ellis RE, Yuan JY, Horvitz HR. Mechanisms and functions of cell death. *Annu Rev Cell Biol*. 1991;7:663–698. [PubMed] [Google Scholar] Gillis S, Smith KA. Long term culture of tumour-specific cytotoxic T cells. *Nature*. 1977 Jul 14;268(5616):154–156. [PubMed] [Google Scholar] Golstein P, Ojcius DM, Young JD. Cell death mechanisms and the immune system. *Immunol Rev*. 1991 Jun;121:29–65. [PubMed] [Google Scholar] Karasuyama H, Melchers F. Establishment of mouse cell lines which constitutively secrete large quantities of interleukin 2, 3, 4 or 5, using modified cDNA expression vectors. *Eur J Immunol*. 1988 Jan;18(1):97–104. [PubMed] [Google Scholar] Kinashi T, Inaba K, Tsubata T, Tashiro K, Palacios R, Honjo T. Differentiation of an interleukin 3-dependent precursor B-cell clone into immunoglobulin-producing cells in vitro. *Proc Natl Acad Sci U S A*. 1988 Jun;85(12):4473–4477. [PMC free article] [PubMed] [Google Scholar] Lanier LL, Warner NL. Cell cycle related heterogeneity of Ia antigen expression on a murine B lymphoma cell line: analysis by flow cytometry. *J Immunol*. 1981 Feb;126(2):626–631. [PubMed] [Google Scholar] Leo O, Foo M, Sachs DH, Samelson LE, Bluestone JA. Identification of a monoclonal antibody specific for a murine T3 polypeptide. *Proc Natl Acad Sci U S A*. 1987 Mar;84(5):1374–1378. [PMC free article] [PubMed] [Google Scholar] Letourneur F, Klausner RD. Activation of T cells by a tyrosine kinase activation domain in the cytoplasmic tail of CD3 epsilon. *Science*. 1992 Jan 3;255(5040):79–82. [PubMed] [Google Scholar] MacDonald HR, Lees RK. Programmed death of autoreactive thymocytes. *Nature*. 1990 Feb 15;343(6259):642–644. [PubMed] [Google Scholar] Martin DP, Schmidt RE, DiStefano PS, Lowry OH, Carter JG, Johnson EM, Jr. Inhibitors of protein synthesis and RNA synthesis prevent neuronal death caused by nerve growth factor deprivation. *J Cell Biol*. 1988 Mar;106(3):829–844. [PMC free article] [PubMed] [Google Scholar] Nunez G, London L, Hockenbery D, Alexander M, McKeam JP, Korsmeyer SJ. Deregulated Bcl-2 gene expression selectively prolongs survival of growth factor-deprived hemopoietic cell lines. *J Immunol*. 1990 May 1;144(9):3602–3610. [PubMed] [Google Scholar] Oppenheim RW. Cell death during development of the nervous system. *Annu Rev Neurosci*. 1991;14:453–501. [PubMed] [Google Scholar] Oppenheim RW, Prevette D, Tytell M, Homma S. Naturally occurring and induced neuronal death in the chick embryo in vivo requires protein and RNA synthesis: evidence for the role of cell death genes. *Dev Biol*. 1990 Mar;138(1):104–113. [PubMed] [Google Scholar] Palacios R, Karasuyama H, Rolink A, Lyl+ PRO-B lymphocyte clones. Phenotype, growth requirements and differentiation in vitro and in vivo. *EMBO J*. 1987 Dec 1;6(12):3687–3693. [PMC free article] [PubMed] [Google Scholar] Reth M. Antigen receptor tail clue. *Nature*. 1989 Mar 30;338(6214):383–384. [PubMed] [Google Scholar] Romeo C, Amiot M, Seed B. Sequence requirements for induction of cytolysis by the T cell antigen/Fc receptor zeta chain. *Cell*. 1992 Mar 6;68(5):889–897. [PubMed] [Google Scholar] Rubin BY, Smith LJ, Hellermann GR, Lunn RM, Richardson NK, Anderson SL. Correlation between the anticellular and DNA fragmenting activities of tumor necrosis factor. *Cancer Res*. 1988 Nov 1;48(21):6006–6010. [PubMed] [Google Scholar] Sanger F, Nicklen S, Coulson AR. DNA sequencing with chain-terminating inhibitors. *Proc Natl Acad Sci U S A*. 1977 Dec;74(12):5463–5467. [PMC free article] [PubMed] [Google Scholar] Schwartz LM, Kosz L, Kay BK. Gene activation is required for developmentally programmed cell death. *Proc Natl Acad Sci U S A*. 1990 Sep;87(17):6594–6598. [PMC free article] [PubMed] [Google Scholar] Sentman CL, Shutter JR, Hockenbery D, Kanagawa O, Korsmeyer SJ. bcl-2 inhibits multiple forms of apoptosis but not negative selection in thymocytes. *Cell*. 1991 Nov 29;67(5):879–888. [PubMed] [Google Scholar] Shi YF, Sahai BM, Green DR. Cyclosporin A inhibits activation-induced cell death in T-cell hybridomas and thymocytes. *Nature*. 1989 Jun 22;339(6226):625–626. [PubMed] [Google Scholar] Smith CA, Williams GT, Kingston R, Jenkinson EJ, Owen JJ. Antibodies to CD3/T-cell receptor complex induce death by apoptosis in immature T cells in thymic cultures. *Nature*. 1989 Jan 12;337(6203):181–184. [PubMed] [Google Scholar] Strasser A, Harris AW, Cory S. bcl-2 transgene inhibits T cell death and perturbs thymic self-censorship. *Cell*. 1991 Nov 29;67(5):889–899. [PubMed] [Google Scholar] Tata JR. Requirement for RNA and protein synthesis for induced regression of the tadpole tail in organ culture. *Dev Biol*. 1966 Feb;13(1):77–94. [PubMed] [Google Scholar] Tokunaga K, Taniguchi H, Yoda K, Shimizu M, Sakiyama S. Nucleotide sequence of a full-length cDNA for mouse cytoskeletal beta-actin mRNA. *Nucleic Acids Res*. 1986 Mar 25;14(6):2829–2829. [PMC free article] [PubMed] [Google Scholar] Truman JW. Cell death in invertebrate nervous systems. *Annu Rev Neurosci*. 1984;7:171–188. [PubMed] [Google Scholar] Ucker DS, Ashwell JD, Nickas G. Activation-driven T cell death. I. Requirements for de novo transcription and translation and association with genome fragmentation. *J Immunol*. 1989 Dec 1;143(11):3461–3469. [PubMed] [Google Scholar] Vaux DL, Cory S, Adams JM. Bcl-2 gene promotes haemopoietic cell survival and cooperates with c-myc to immortalize pre-B cells. *Nature*. 1988 Sep 29;335(6189):440–442. [PubMed] [Google Scholar] von Heijne G. A new method for predicting signal sequence cleavage sites. *Nucleic Acids Res*. 1986 Jun 11;14(11):4683–4690. [PMC free article] [PubMed] [Google Scholar] Watanabe-Fukunaga R, Brannan CI, Copeland NG, Jenkins NA, Nagata S. Lymphoproliferation disorder in mice explained by defects in Fas antigen that mediates apoptosis. *Nature*. 1992 Mar 26;356(6367):314–317. [PubMed] [Google Scholar]

Submitter
Sofra Xanya
science@iellios.com - United Kingdom

Presenter
Sofra Ph.d Xanya
science - United Kingdom

#8276

Brainwashed by Marketing

62 - Anti-aging & integrative medicine

Sofra Ph.d X^{1,2}

¹City University, London, United kingdom

²New School for Social Research, New york city, United states

Background/Objectives: The inconspicuous engine of brainwashing regulates our choices, compromising “free” will. Wealth directs social and political trends. Ads redefine our needs. Large corporations finance and indoctrinate science articles in well-known journals to program our education. The anti-ageing industry treats the body like a glass with evaporating liquid that needs replacement. We inject hormones to counteract hormonal decline. Stem cells to replenish the body’s decline. We forget about immunorejection, or even worse when the immune system attacks the transplant leading to what happened with the cytokine storm of white blood cells attacking vital organs during the COVID 19 era. Injecting ESCs iPSCs or NTSCs could trigger tumorigenesis. There is no longitudinal research to certify the compatibility of a specific individual with hormones or stem cells extracted from a sheep or plant. Importantly, the body is a Gestalt, an alive entity that is more than the sum of the cells that compose it and complex interacting functions that sustain life. For example, driven by the simple deduction that longer telomeres will offer the fountain of youth, marketing driven research focused on telomerase. Recent studies examined people ages 7-83, with mutations in the POT1 gene which plays a role in telomere length regulation. Results did not support the hypothesis that longer telomeres will delay ageing. On the contrary, they outlined the dangers of longer telomeres: Fifteen out of the 17 subjects evidenced both malignant and benign neoplasms. The bright light of multibillion-dollar marketing campaigns brainwashes the public to think that the “invisible wound” under the surface of the skin caused by laser or RF procedures is the vessel that will take people back in time. We miss the obvious: that a healthy body looks younger than a sick one. Age delay is the result of health and strong immunity. Trauma will eventually compromise immunity and speed up ageing. Several investigators have demonstrated that “impaired immune surveillance” results in senescent cells which increase the ageing process. Repeated trauma increases inflammation which accelerates ageing. Several researchers have emphasized the close association of inflammageing with metabolic and other chronic diseases which surface as we get older. Research on the persistence of neuronal communications beyond barriers unveils a vast dynamic complexity of biological communications networks that may behave differently under unforeseeable circumstances. This precarious dynamic variability warrants the necessity of longitudinal studies before concluding the efficacy of any technology. Unfortunately, there are no long term laser, RF, stem cells or Hormone injection studies that investigate the long term results of these procedure. The new approach to anti-aging should focus on enhancing cellular communications and enhancing health without interfering with or traumatizing the body

Submitter
Michon Alain
a.michon@projectskinmd.com - Canada

Presenter
Michon Alain
a.michon@projectskinmd.com - Canada

#8278

The F.I.L.L.E.R. lip injection technique - rejuvenation of lip and softening of perioral lines with Improved comfort and safety

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Michon A¹

¹Project Skin MD, Ottawa, Canada

Background/Objectives: The lip plays an essential role in facial attractiveness and is a popular aesthetic unit among young and older adults seeking non-surgical beautification or rejuvenation. Importantly, it was revealed that the perioral region attracts the most attention of observers and contributes to an aged facial appearance. Hence, it should be addressed during consultation and treatment planning.

Methods: The author will present a novel technique called F.I.L.L.E.R. (Fanning-type Injections of the Lip with Lidocaine and Ergotrid Rhytidoplasty) to rejuvenate the lip and perioral area with hyaluronic acid and for added comfort and safety.

Results: Cases of older patients treated effectively with the F.I.L.L.E.R. technique and with signs of perioral ageing will be presented.

Conclusions: The lip and perioral area can be treated effectively using the F.I.L.L.E.R. technique.

References: Frank K, Ehrl D, Bernardini F, Walbrun A, Moellhoff N, Alfertshofer M, Davidovic K, Mardini S, Gotkin RH, Cotofana S. How We Look At Mature Faces-An Eye-Tracking Investigation Into the Perception of Age. Aesthet Surg J. 2023 Feb 3;43(2):115-122. doi: 10.1093/asj/sjac251. PMID: 36099471.

Submitter
Michon Alain
a.michon@projectskinmd.com - Canada

Presenter
Michon Alain
a.michon@projectskinmd.com - Canada

#8279

Live hyaluronic acid soft tissue filler injections for pre or post congress masterclass

77 - Unclassified topics

Michon A¹

¹Project Skin MD, Ottawa, Canada

Background/Objectives: The author is an MD Codes faculty for Allergan Aesthetics Canada and a consultant for Galderma. He will be more than happy to perform live injections if there is a need. Thank you

Submitter
Michon Alain
a.michon@projectskinmd.com - Canada

Presenter
Michon Alain
a.michon@projectskinmd.com - Canada

#8280

Preventative "Tox" : Myth or Reality? What is the evidence for cosmetic botulinumtoxinA in young adults

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Michon A¹

¹Project Skin MD, Ottawa, Canada

Background/Objectives: There is an influx of young adults seeking botulinumtoxinA treatment to prevent wrinkles. Millennials and Generation Z (Gen Z) correspond to the generations born between 1981 – 1996 and 1997 – 2012, respectively. Together, they constitute the age group that received more than a third of all BoNTA performed worldwide in 2020, and it is estimated that they will be the most significant users of BoNTA by 2025. However, what is the evidence for "preventative tox", and what dosage should we use? **Materials/method:** An evidence-based literature review was performed to evaluate the current evidence on BoNTA injections for cosmetic indications in millennials (born between 1981 and 1996) and young adults. A cross-sectional online survey was distributed to aesthetic practitioners from different countries to assess their current practice with BoNTA. **Results:** • Wrinkle prevention is the most common reason for seeking treatment in young adults • There is a paucity of evidence on "preventative tox." • On average, younger adults receive fewer units of BoNTA at the glabella, forehead, and crow's feet **Conclusion:** The literature review supports the efficacy of BoNTA for correcting wrinkles in millennials. However, there is limited evidence on preventative "Tox". Our findings provide further insight into the dosing pattern of cosmetic BoNTA and motivating factors for seeking treatments in young adults.

Submitter
Michon Alain
a.michon@projectskinmd.com - Canada

Presenter
Michon Alain
a.michon@projectskinmd.com - Canada

#8281

Is more better? Benefits of HA soft tissue filler on the psychological and social-related quality of life dimensions

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Michon A¹

¹Project Skin MD, Ottawa, Canada

Background/Objectives: Background: Hyaluronic acid (HA) soft-tissue fillers are popular for volumizing, sculpting, or rejuvenating the face. Their effect beyond these cosmetic benefits remains poorly defined, especially the changes in the psychological and social dimensions of health. Objectives: To review the psychology of beauty and attractiveness in facial aesthetics and to determine the impact of hyaluronic acid soft tissue filler on the psychosocial dimension of health, and to determine whether injecting more facial aesthetic units with HA soft tissue filler will improve the health-related quality of life dimension of patients. Methods: A prospective study was conducted to assess the psychological and social benefits of treating multiple facial aesthetic units with HA soft-tissue filler using three validated FACE-Q scales at baseline and four weeks posttreatment between January and August 2022. Results: Data for 28 participants (n = 26 females [93%]; mean age: 49.7 ± 10.1 years) are available and reveal significant improvements in the psychological (+24.5; P < .001) and social functioning (+18.5; P < .001) FACE-Q scales and a reduction in the appearance-related distress score (−17.8; P < .001) posttreatment compared to baseline. A mean volume of 4.7 ml (range 1.0-15.2 ml) was injected. However, patients who had more than two facial aesthetic units injected did not statistically score better on the FACE-Q scales. Conclusion: Facial treatment with HA fillers was associated with a marked improvement in the dimension of health-related quality of life. While understanding patients' aims and motivation is essential, an individualized treatment approach is strongly encouraged instead of a "whole-face" approach. Reference: Alain Michon, MD, MSc, CCFP-EM, Haidar Hassan, DDS, FDSRCS, MSc, PhD, Is More Better? Benefits of Hyaluronic Acid Soft Tissue Filler on the Psychological- and Social-Related Quality of Life Dimensions, Aesthetic Surgery Journal Open Forum, Volume 4, 2022, ojac086, <https://doi.org/10.1093/asjof/ojac086>

Submitter
Sofra Xanya
science@iellios.com - United Kingdom

Presenter
Sofra Ph.d Xanya
science@iellios.com - United Kingdom

#8283

Visceral Fat – The Blind Spot in Body sculpting that undermines Health with Toxicity and Inflammation

50 - Body contouring & skin tightening

Sofra Ph.d X^{1,2}

¹City University, London, United kingdom

²New School for Social Research, New york city, United states

Background/Objectives: Aging is accompanied by decreased metabolism, increased toxicity, decreased skeletal muscle mass (SMM) & BMR, & increased visceral fat. Excessive exercise necessary to reduce visceral fat elevates cortisol while decreasing testosterone resulting in hormonal imbalance. The inverse cortisol/testosterone relationship leads to weight gain despite all the efforts invested in physical activity. Hepatic detoxification systems are overloaded by toxicity which disorganizes hypothalamic satiety modulation of central inhibitors & stimulators of appetite, including leptin & ghrelin triggering hunger. A review of energy-based technologies reveals successful results in reducing subcutaneous fat layers, however, data is not currently available for deeper visceral fat reduction. Results usually rebound after laser and RF treatments, or fat migrates to other non-treated parts of the body forming new fat deposits in unwanted areas. A review of studies using exercise and nutrition shows greater permanence, especially with individuals who have adapted to a healthier lifestyle.

Methods: We conducted a series of studies combining a structured regimen of different exercise methods designed to accommodate individuals over 50 who maintained substantial visceral fat deposits despite regular visits to the gym (the high activity group) and people with a sedentary lifestyle (the low activity group). We examined hormonal fluctuations of triiodothyronine Free T3, Testosterone, cortisol and dehydroepiandrosterone (DHEA), C-Reactive Protein, plus concentrations of the low-density lipoprotein (LDL), the high-density lipoprotein (HDL) and Triglycerides

Results: One-Tailed, t-tests showed that both visceral and overall fat were significantly reduced in both groups. Blood tests yielded a statistically significant decrease of LDL & Triglycerides & a significant increase in HDL, DHEA, Testosterone and Free T3 and C-reactive protein for both groups. However, when the high activity and low activity group were compared, the high activity group had significantly better results in all variables. Sonography reports showed significantly greater improvement in the fatty liver of the subjects who also exercised on their own. Analysis of the food questionnaire indicated that these subjects followed a healthier nutrition program and avoided high caloric foods in contrast to the low activity group that demonstrated the exact opposite

Conclusions: Lifestyle and exercise have always been centre stage in weight loss maintenance. But once visceral fat has been accumulated, it stubbornly persists without an easy solution, since it cannot be eliminated by energy devices of any other popular method currently promoted in most clinics. A more structured regimen of combined exercise methods that specifically targets visceral fat is recommended

References: Després, J. and Lemieux, I. (2006) Abdominal Obesity and Metabolic Syndrome. *Nature*, 444, 881-887. <https://doi.org/10.1038/nature05488> [4] Larsson, B., Svärdsudd, K., Welin, L., Wilhelmsen, L., Björntorp, P. and Tibblin, G. (1984) Abdominal Adipose Tissue Distribution, Obesity, and Risk of Cardiovascular Disease and Death: 13 Year Follow up of Participants in the Study of Men Born in 1913. *British Medical Journal (Clinical Research Ed.)*, 288, 1401-1404. <https://doi.org/10.1136/bmj.288.6428.1401> [5] Rabkin, S.W. and Mathewson, F.A. (1977) Hsu PH: Relation of Body Weight to Development of Ischemic Heart Disease in a Cohort of Young North American Men after a 26 Year Observation Period: the Manitoba Study. *The American Journal of Cardiology*, 39, 452-458. [https://doi.org/10.1016/S0002-9149\(77\)80104-5](https://doi.org/10.1016/S0002-9149(77)80104-5) [6] Odegaard, A.O., Koh, W. P., Vazquez, G., Arakawa, K., Lee, H.P., Mimi, C.Y. and Pereira, M.A. (2009) BMI and Diabetes Risk in Singaporean Chinese. *Diabetes Care*, 32, 1104-1106. <https://doi.org/10.2337/dc08-1674> [7] Resnick, H.E., Valsania, P., Halter, J.B. and Lin, X. (1998) Differential Effects of BMI on Diabetes Risk among Black and White Americans. *Diabetes Care*, 21, 1828-1835. <https://doi.org/10.2337/diacare.21.11.1828> [8] Resnick, H.E., Valsania, P., Halter, J.B. and Lin, X. (1998) Relation of Weight Gain and Weight Loss on Subsequent Diabetes Risk in Overweight Adults. *Journal of Epidemiology & Community Health*, 54, 596-602. <https://doi.org/10.1136/jech.54.8.596> [9] Peng, Y.D., Meng, K., Guan, H.Q., et al. (2020) Clinical Characteristics and Outcomes of 112 Cardiovascular Disease Patients Infected by 2019-nCoV. *Chinese Journal of Cardiovascular Diseases*, 48, E004. [10] Jia, X., Yin, C., Lu, S., Chen, Y., Liu, Q., Bai, J. and Lu, Y. (2020) Two Things about COVID-19 Might Need Attention. *Preprints*, 2020020315. <https://doi.org/10.20944/preprints202002.0315.v1> [11] Hoffmann, M., Kleine-Weber, H., Schroeder, S., et al. (2020) SARS-CoV-2 Cell Entry Depends on ACE2 and TMPRSS2 and Is Blocked by a Clinically Proven Protease Inhibitor. *Cell*, 181, 271-280.E8. <https://www.sciencedirect.com/science/article/pii/S0092867420302294> [12] Ira Martin, G and Sowers, J.R. (2014) Thyroid and the Heart. *The American Journal of Medicine*, 127, 691-698. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4318631> [13] Perros, P., McCrimmon R.J., Shaw G. and Frier, B.M. (1995) Frequency of Thyroid Dysfunction in Diabetic Patients: Value of Annual Screening. *Diabetic Medicine*, 12, 622-627. <https://www.ncbi.nlm.nih.gov/pubmed/7554786> [14] Dundas, L.H., Orgiazzi, J. and Brabant, G. (2011) The Interface between Thyroid and Diabetes Mellitus. *Clinical Endocrinology*, 75, 1-9. <https://www.ncbi.nlm.nih.gov/pubmed/21521298> [15] Nirosha, K., Divya, M., Vamsi, S. and Sadiq, M. (2014) A Review on Hyperlipidemia. *International Journal of Novel Trends in Pharmaceutical Sciences*, 4, 81-92. <https://scienztech.org/ijnts/article/view/112> [16] Ren, J., Grundy, S.M., Liu, J., Wang, W., Wang, M., Sun, J., Li, Y., Wu, Z. and Zhao, D. (2010) Long-Term Coronary Heart Disease Risk Associated with Very-Low-Density Lipoprotein Cholesterol in Chinese: The Results of a 15-Year Chinese Multi-Provincial Cohort Study (CMCS). *Atherosclerosis*, 211, 327-332. Ginsberg HN. (1987) Very Low Density Lipoprotein Metabolism in Diabetes Mellitus. *Diabetes/Metabolism Reviews*, 3, 571-589. <https://www.ncbi.nlm.nih.gov/pubmed/3552533> [18] Whitworth, J.A., Williamson, P.M., Mangos, G. and Kelly, J.J. (2005) Cardiovascular Consequences of Cortisol Excess. *Vascular Health and Risk Management*, 1, 291-299. <https://doi.org/10.2147/vhrm.2005.1.4.291> [19] Chiodini, I., Adda, G., Scillitani, A., Coletti, F., Morelli, V., Di Lembo, S. and Am-brosi, B. (2007) Cortisol Secretion in Patients with Type 2 Diabetes: Relationship with Chronic Complications. *Diabetes Care*, 30, 83-88. <https://doi.org/10.2337/dc06-1267> [20] Kelly, J.J., Mangos, G., Williamson, P.M. and Whitworth, J.A. (1998) Cortisol and Hypertension. *Clinical and Experimental Pharmacology and Physiology*, 25, S51-S56. <https://doi.org/10.1111/j.1440-1681.1998.tb02301.x> [21] George, S.A., Khan, S., Briggs, H. and Abelson, J.L. (2010) CRH-Stimulated Cortisol Release and Food Intake in Healthy, Non-Obese Adults. *Psychoneuroendocrinology*, 35, 607-612. <https://doi.org/10.1016/j.psyneuen.2009.09.017> [22] Hyman, M. (2005) Systems Biology, Toxins, Obesity, and Functional Medicine. The Proceedings from the 13th International Symposium of the Institute for Functional Medicine Managing Biotransformation: The Metabolic, Genomic, and Detoxification-tion Balance Points, S134-139. http://www.alternative-therapies.com/atweb_pdfs/ifm_proceedings_low.pdf [23] Abdemur, A., Stone, J., Berho, M., Gianso, M., Szostein, S. and Rosenthal, R.J. (2014) Morphology, Localization, and Patterns of Ghrelin-Producing Cells in Stomachs of a Morbidly Obese Population. *Surgical Laparoscopy Endoscopy & Percutaneous Techniques*, 24, 122-126. <https://pubmed.ncbi.nlm.nih.gov/24686346/> [24] Zakrzewska, K.E., Cusin, I., Sainsbury, A., Rohmer-Jeanraud, F. and Jeanraud, B. (1997) Glucocorticoids as Counterregulatory Hormones of Leptin: Toward an Understanding of Leptin Resistance. *Diabetes*, 46, 717-719. <https://pubmed.ncbi.nlm.nih.gov/9075817/> [25] Banks, W.A. (2012) Role of the Blood-Brain Barrier in the Evolution of Feeding and Cognition. *Annals of the New York Academy of Sciences*, 1264, 13-19. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3464352/> [26] Correia, M.L. and Haynes, W.G. (2004) Leptin, Obesity and Cardiovascular Disease. *Current Opinion in Nephrology and Hypertension*, 13, 215-223. <https://pubmed.ncbi.nlm.nih.gov/15202616/> [27] Alt, D., Sambamurthy, C. and Kalangi, S.K. (2018) Emergence of Leptin in Infection and Immunity: Scope and Challenges in Vaccines Formulation. *Frontiers in Cellular and Infection Microbiology*, 8, 147. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5954041/> [28] Ceddia, R., William, W. and Curi, R. (1999) Comparing Effects of Leptin and Insulin on Glucose Metabolism in Skeletal Muscle: Evidence for an Effect of Leptin on Glucose Uptake and Decarboxylation. *International Journal of Obesity*, 23, 75-82. <https://doi.org/10.1038/sj.ijo.0800762> [29] O'Rourke, L., Gronning, L.M., Yeaman, S.J. and Shepherd, P.R. (2002) Glucose-Dependent Regulation of Cholesterol Ester Metabolism in Macrophages by Insulin and Leptin. *Journal of Biological Chemistry*, 277, 42557-42562. <https://pubmed.ncbi.nlm.nih.gov/12200416/>

Submitter
Sofra Xanya
science@iellios.com - United Kingdom

Presenter
Sofra Ph.d Xanya
science@iellios.com - United Kingdom

#8284

Inflammation and the State of the Art on Skin Repair and Hair Growth Treatments

52 - Hair restoration

Sofra Ph.d X^{1,2}

¹City University, London, United kingdom

²New School for Social Research, New york city, United states

Background/Objectives: We present a thorough literature review on the reported and actual statistical significance of laser and radiofrequency studies that is often contradictory, on both skin repair and hair growth. Some RF and laser studies postulate short-term improvement on skin repair, and substantial results on hair health. However, there are underreported, effects reversal or reoccurrence or certain skin disorders such as pigmentation which generally reoccur following laser or RF treatments. A main issue pertaining to such technologies is the results of inflammation. Laser and RF companies claim reduction of inflammation. Yet, a large body of research demonstrates significant inflammation increase after trauma-based procedures. A diligent evaluation of other methods and techniques is also conducted based on research and clinical studies presented, with inflammation being the centrepiece.

Methods: In our randomized, double-blind longitudinal clinical research, we followed 22 clinical cases treated with a novel resonance anti-inflammatory technology for up to 4 years

Results: All subjects evidenced irreversible skin repair and hair growth. Results on hair were slower to appear and ranged from two weeks to one month before observing the full effect. The number of treatments required for substantial repair depended on the chronicity and severity of skin condition, and the extent of hair loss, rather than age. More chronic, difficult cases required more treatments irrespective of whether the subject was younger or older. These results on age-independent skin repair and hair growth advocated for the importance of anti-inflammatory techniques to counterbalance immune insufficiency, age-accumulated oxidative stress, and disrupted cellular communications.

Conclusions: Focus should be shifted from the immediacy of results to the long-term effects of the results with respect to evaluating different treatment modalities on skin repair and hair growth. Inflammation is one of the main reasons for both aging and disease. In assessing the efficacy of a technology, it is important to diligently look for evidence pertinent to the absence of inconspicuous, or insidiously forming inflammation following the procedure, a perspective that most published and unpublished clinical studies fail to consider, since they do not test for inflammatory interleukins or levels of the C-reactive protein that would evidence the presence of inflammation.

References: Akaishi, S., Koike, S., Dohi, T., Kobe, K., Hyakusoku, H., & Ogawa, R. (2012). Nd: YAG laser treatment of keloids and hypertrophic scars. *Eplasty*, 12. Araque A, Navarrete, M (2010). Glial cells in neuronal network function. *Philos Trans R Soc Lond B Biol Sci*. Aug 12; 365(1551): 2375–2381. doi: 10.1098/rstb.2009.0313 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2894949/> Balch WE, Dunphy WG, Braell WA, Rothman JE (1984): Reconstitution of the transport of protein between successive compartments of the Golgi measured by the coupled incorporation of N-acetylglucosamine. *Cell*; 39:405–416. <https://www.ncbi.nlm.nih.gov/pubmed/6498939> DOI: 10.1016/0092-8674(84)90019-9 Baylis, D., Bartlett, D. B., Patel, H. P., & Roberts, H. C. (2013). Understanding how we age: insights into inflammaging. *Longevity & healthspan*, 2, 1–8. Chaban V, Cho T, Reid c. B., Norris K, C (2013). Physically disconnected non-diffusible cell-to-cell communication between neuroblastoma SH-SY5Y and DRG primary sensory neurons. *American Journal of Translational Research*; 5(1): 69–79. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3560476/> PMID: 23390567 Chen, G., Hou, Z., Gulbranson, D. R., & Thomson, J. A. (2010). Actin-myosin contractility is responsible for the reduced viability of dissociated human embryonic stem cells. *Cell stem cell*, 7(2), 240–248. Chow, M. T., Möller, A., & Smyth, M. J. (2012, February). Inflammation and immune surveillance in cancer. In *Seminars in cancer biology* (Vol. 22, No. 1, pp. 23–32). Academic Press. De Heredia, F. P., Gómez-Martínez, S., & Marcos, A. (2012). Obesity, inflammation and the immune system. *Proceedings of the Nutrition Society*, 71(2), 332–338. del Pino Emilia, M., Rosado, R.H., Azuela, A., Graciela, M.G., Argüelles, D., Rodríguez, C. and Rosado, G.M., (2006). Effect of controlled volumetric tissue heating with radiofrequency on cellulite and the subcutaneous tissue of the buttocks and thighs. *Journal of drugs in dermatology*; JDD, 5(8), pp.714–722. PMID: 16989185 El Sayed, M. H., Abdallah, M. A., Aly, D. G., & Khater, N. H. (2016). Association of metabolic syndrome with female pattern hair loss in women: a case–control study. *International journal of dermatology*, 55(10), 1131–1137. Franco, W., Kothare, A., and Goldberg, D.J., (2009). Controlled volumetric heating of subcutaneous adipose tissue using a novel radiofrequency technology. *Lasers in Surgery and Medicine: The Official Journal of the American Society for Laser Medicine and Surgery*, 41(10), pp.745–750. <https://doi.org/10.1002/lsm.20876> Derrick, C. D., Shridharani, S. M., & Broyles, J. M. (2015). The safety and efficacy of cryolipolysis: a systematic review of available literature. *Aesthetic Surgery Journal*, 35(7), 830–836. Duschler, D., Rennert, R. C., Januszyk, M., Anghel, E., Maan, Z. N., Whittam, A. J., ... & Gurtner, G. C. (2014). Aging disrupts cell subpopulation dynamics and diminishes the function of mesenchymal stem cells. *Scientific reports*, 4(1), 7144. Faiella, W., & Atoui, R. (2016). Therapeutic use of stem cells for cardiovascular disease. *Clinical and translational medicine*, 5(1), 1–8. Franco, W., Kothare, A., and Goldberg, D.J., (2009). Controlled volumetric heating of subcutaneous adipose tissue using a novel radiofrequency technology. *Lasers in Surgery and Medicine: The Official Journal of the American Society for Laser Medicine and Surgery*, 41(10), pp.745–750. <https://doi.org/10.1002/lsm.20876> Franco, W., Kothare, A., Ronan, S.J., Grekin, R.C. and McCalmont, T.H., (2010). Hyperthermic injury to adipocyte cells by selective heating of subcutaneous fat with a novel radiofrequency device: feasibility studies. *Lasers in surgery and medicine*, 42(5), pp.361–370. <https://doi.org/10.1002/lsm.20925> Franceschi, C., Garagnani, P., Vitale, G., Capri, M., & Salvioli, S. (2017). Inflammaging and 'Garb-aging'. *Trends in Endocrinology & Metabolism*, 28(3), 199–212. Franceschi, C., Garagnani, P., Parini, P., Giuliani, C., & Santoro, A. (2018). Inflammaging: a new immune–metabolic viewpoint for age-related diseases. *Nature Reviews Endocrinology*, 14(10), 576–590. Freeman, G.J., Long, A.J., Iwai, Y., Bourque, K., Chernova, T., Nishimura, H., Fitz, L.J., Malenkovich, N., Okazaki, T., Byrne, M.C., Horton, H.F., Fouser, L., Carter, L., Ling, V., Bowman, M.R., Carreno, B.M., Collins, M., Wood, C.R. & Honjo, T. (2000). Engagement of the PD-1 immunoinhibitory receptor by a novel B7 family member leads to negative regulation of lymphocyte activation. *J Exp Med*, 192(7), 1027–1034. <https://www.ncbi.nlm.nih.gov/pubmed/11015443> DOI: 10.1084/jem.192.7.1027 Fujita, J., Crane, A. M., Souza, M. K., Dejesse, M., Kyba, M., Flavell, R. A., ... & Zwaka, T. P. (2008). Caspase activity mediates the differentiation of embryonic stem cells. *Cell stem cell*, 2(6), 595–601. Fülöp, T., Larbi, A., & Witkowski, J. M. (2019). Human inflammaging. *Gerontology*, 65(5), 495–504. Gupta, S., & Kalra, A. (2002). Efficacy and safety of intraliesional 5-fluorouracil in the treatment of keloids. *Dermatology*, 204(2), 130–132. Gurdin J., Yamanaka S. (2012). The Nobel Prize in Physiology or Medicine 2012. *NobelPrize.org*. Nobel Prize Outreach AB 2024. Wed. 28 Feb 2024. <https://www.nobelprize.org/prizes/medicine/2012/summary> Hata Y, Slaughter CA, Südhof TC (1993). Synaptic vesicle fusion complex contains unc-18 homologue bound to syntaxin. *Nature*; 366:347–351. <https://www.ncbi.nlm.nih.gov/pubmed/8247129> DOI: 10.1038/362318a0 Haworth, R., & Sharpe, M. (2021). Accept or reject: the role of immune tolerance in the development of stem cell therapies and possible future approaches. *Toxicologic Pathology*, 49(7), 1308–1316. Hodi, F.S., Mihm, M.C., Soiffer, R.J., Haluska, F.G., Butler, M., Seiden, M.V., Davis, T., Henry-Spires, R., MacRae, S., Willman, A., Padera, R., Jaklitsch, M.T., Shankar, S., Chen, T.C., Korman, A., Allison, J.P. & Dranoff, G. (2003). Biologic activity of cytotoxic T lymphocyte-associated antigen 4 antibody blockade in previously vaccinated metastatic melanoma and ovarian carcinoma patients. *Proc Natl Acad Sci USA*, 100(8), 4712–4717. <https://www.ncbi.nlm.nih.gov/pubmed/12682289> DOI: 10.1073/pnas.0830997100 Hsuan, Y. C. Y., Lin, C. H., Chang, C. P., & Lin, M. T. (2016). Mesenchymal stem cell-based treatments for stroke, neural trauma, and heat stroke. *Brain and behavior*, 6(10), e00526. Ishida, Y., Agata, Y., Shibahara, K., & Honjo, T. (1992). Induced expression of PD-1, a novel member of the immunoglobulin gene superfamily, upon programmed cell death. *EMBO J.*, 11(11), 3887–3895. <https://www.ncbi.nlm.nih.gov/pubmed/1396582> PMID: 1396582PMCID: PMC556898 Iwai, Y., Terawaki, S., & Honjo, T. (2005). PD-1 blockade inhibits hematogenous spread of poorly immunogenic tumor cells by enhanced recruitment of effector T cells. *Int Immunol*, 17(2), 133–144. <https://www.ncbi.nlm.nih.gov/pubmed/15611321> DOI: 10.1093/intimm/dxh194 Jalian, H. R., Avram, M. M., Garibyan, L., Mihm, M. C., & Anderson, R. R. (2014). Paradoxical adipose hyperplasia after cryolipolysis. *JAMA dermatology*, 150(3), 317–319. James E. Rothman, Randy W. Schekman and Thomas C. Südhof. Nobel Prize in Physiology or Medicine (2013). Machinery regulating vesicle traffic, a major transport system in our cells. <https://www.nobelprize.org/prizes/medicine/2013/summary/> Jaworsky C, Kligman AM, Murphy GF (1992). Characterization of inflammatory infiltrates in male pattern alopecia: implications for pathogenesis. *Br J Dermatol*; 127(3):239–246. doi: 10.1111/j.1365-2133.1992.tb00121.x1390168 Kaiser CA, Schekman R (1990): Distinct sets of SEC genes govern transport vesicle formation and fusion early in the secretory pathway. *Cell*; 61:723–733. <https://www.ncbi.nlm.nih.gov/pubmed/2188733> DOI: 10.1016/0092-8674(90)90483-u Kapoor, R., Shome, D. and Ranjan, A., (2017). Use of a novel combined radiofrequency and ultrasound device for lipolysis, skin tightening and cellulite treatment. *Journal of Cosmetic and Laser Therapy*, 19(5), pp.266–274. <https://doi.org/10.1080/14764172.2017.1303169> Kandel, E. R., & Squire, L. R. (2000). Neuroscience: Breaking down scientific barriers to the study of brain and mind. *Science*, 290(5494), 1113–1120. Khacho, M., Clark, A., Svoboda, D. S., Azzi, J. G., MacLaurin, J. G., Meghaizel, C., ... & Slack, R. S. (2016). Mitochondrial dynamics impacts stem cell identity and fate decisions by regulating a nuclear transcriptional program. *Cell stem cell*, 19(2), 232–247. Kincaid, C. M., Ben Romdhane, N., Csuka, E. A., Sharma, A. N., Juhasz, M., & Mesinkovska, N. A. (2023). Is There a Role for Radiofrequency Devices in Hair? *Skin Appendage Disorders*, 9(3), 169–178. Koike, S., Akaishi, S., Nagashima, Y., Dohi, T., Hyakusoku, H., & Ogawa, R. (2014). Nd: YAG laser treatment for keloids and hypertrophic scars: an analysis of 102 cases. *Plastic and Reconstructive Surgery–Global Open*, 2(12), e272. Leach, D. R., Krummel, M. F., & Allison, J. P. (1996). Enhancement of antitumor immunity by CTLA-4 blockade. *Science*, 271(5256), 1734–1736. <https://www.ncbi.nlm.nih.gov/pubmed/8596936> DOI: 10.1126/science.271.5256.1734 Legein, B., Temmerman, L., Biessen, E. A., & Lutgens, E. (2013). Inflammation and immune system interactions in atherosclerosis. *Cellular and Molecular Life Sciences*, 70, 3847–3869. Leszczynski, R., da Silva, C. A., Pinto, A. C. P. N., Kuczyński, U., & da Silva, E. M. (2022). Laser therapy for treating hypertrophic and keloid scars. *Cochrane Database of Systematic Reviews*, (9). López-Otín, C., Blasco, M. A., Partridge, L., Serrano, M., & Kroemer, G. (2013). The hallmarks of aging. *Cell*, 153(6), 1194–1217. Ma, R., Chen, L., Hu, N., Caplan, S., & Hu, G. (2023). Cilia and extracellular vesicles in brain development and disease. *Biological Psychiatry*. Faiella, W., & Atoui, R. (2016). Therapeutic use of stem cells for cardiovascular disease. *Clinical and translational medicine*, 5(1), 1–8. Mandal, S., Lindgren, A. G., Srivastava, A. S., Clark, A. T., & Banerjee, U. (2011). Mitochondrial function controls the proliferation and early differentiation potential of embryonic stem cells. *Stem cells*, 29(3), 486–495. Martínez-Jacobo L, Ancer-Arellano CI, Ortiz-Lopez R, et al (2018). Evaluation of the expression of genes associated with inflammation and apoptosis in androgenetic alopecia by targeted RNA-seq. *Skin Appendage Disord*; 4(4):268–273. doi: 10.1159/00048453030410894 Morinaga, H., Mohri, Y., Grachtchouk, M., Asakawa, K., Matsumura, H., Oshima, M., ... & Nishimura, E. K. (2021). Obesity accelerates hair thinning by stem cell-centric converging mechanisms. *Nature*, 595(7866), 266–271. Nikolis, A., & Enright, K. M. (2021). A multicenter evaluation of paradoxical adipose hyperplasia following cryolipolysis for fat reduction and body contouring: a review of 8658 cycles in 2114 patients. *Aesthetic Surgery Journal*, 41(8), 932–941. Nishimura, H., Nose, M., Hiai, H., Minato, N., & Honjo, T. (1999). Development of Lupus-like Autoimmune Diseases by Disruption of the PD-1 gene encoding an ITIM motif-carrying immunoreceptor. *Immunity*, 11, 141–151. Novick P, Schekman R (1979): Secretion and cell-surface growth are blocked in a temperature-sensitive mutant of *Saccharomyces cerevisiae*. *Proc Natl Acad Sci USA* 1979; 76:1858–1862. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC383491/> doi: 10.1073/pnas.76.4.1858 Ojeh, N., Bharatha, A., Gaur, U., & Forde, A. L. (2020). Keloids: current and emerging therapies. *Scars, burns & healing*, 6, 2059513120940499. Oschman J. L. (2005). Energy and the healing response, *Journal of Bodywork and Movement Therapies* 3–15. doi: 10.1016/s1360-8592(03)00092-5. URL [https://dx.doi.org/10.1016/s1360-8592\(03\)00092-5](https://dx.doi.org/10.1016/s1360-8592(03)00092-5) Patel, K. V., Farrant, P., Sanderson, J. D., & Irving, P. M. (2013). Hair loss in patients with inflammatory bowel disease. *Inflammatory Bowel Diseases*, 19(8), 1753–1763. Paul, M. and Mulholland, R.S., (2009). A new approach for adipose tissue treatment and body contouring using radiofrequency-assisted liposuction. *Aesthetic plastic surgery*, 33(5), pp.687–694. DOI 10.1007/s00266-009-9342-z Park, J. S., Kim, H. Y., Kim, H. W., Chae, G. M., Oh, H. T., Park, J. Y., ... & Kwak, S. J. (2005). Increased caveolin-1, a cause for the declined adipogenic potential of senescent human mesenchymal stem cells. *Mechanisms of ageing and development*, 126(5), 551–559. Peng, Y., Ma, A., Xiao, Z., Hao, J., Feng, R., Wang, C., ... & Zhao, T. (2023). Technical specifications for ethics review of human stem cell research. *Cell Proliferation*, 13556. Perin MS, Fried VA, Mignery GA, Jahn R, Südhof TC (1990): Phospholipid binding by a synaptic vesicle protein homologous to the regulatory region of protein kinase C. *Nature*; 345:260–263. <https://www.ncbi.nlm.nih.gov/pubmed/2333096> DOI: 10.1038/345260a0 Peyravian, N., Deo, S., Daunert, S., & Jimenez, J. J. (2020). The inflammatory aspect of male and female pattern hair loss. *Journal of inflammation research*, 879–881. Rajan, Varaguna & Murray, Rachael. (2008). The duplicitous nature of inflammation in wound repair. *Wound Pract Res*. 16, 122–129. Saloman, J. L., Cohen, J. A., & Kaplan, D. H. (2020). Intimate neuro-immune interactions: breaking barriers between systems to make meaningful progress. *Current Opinion in Neurobiology*, 62, 60–67. Santoro, A., Bientinesi, E., & Monti, D. (2021). Immunosenescence and inflammaging in the aging process: age-related diseases or longevity?. *Ageing Research Reviews*, 71, 1042252. So, B. J., Yoon, S. H., & Do, J. T. (2018). Mitochondrial dynamics in stem cells and differentiation. *International journal of molecular sciences*, 19(12), 3893. Smolarczyk, K., Meczekalski, B., Rudnicka, E., Suchta, K., & Szeliga, A. (2024). Association of Obesity and Bariatric Surgery on Hair Health. *Medicina*, 60(2), 325.. Snow, D. M., Lemmon, V., Carrino, D. A., Caplan, A. I., & Silver, J. (1990). Sulfated proteoglycans in astroglial barriers inhibit neurite outgrowth in vitro. *Experimental neurology*, 109(1), 111–130. Sofra, X. (2020) Gain without Pain: Beyond Sport Effortless Exercise Solutions. *Journal of Aesthetic Nursing*, 9, 202–210. <https://doi.org/10.12968/joan.2020.9.5.202> [Citation Time(s):1] Sofra, X. and Lampe, N. (2020) Empowering the Woman: A Comprehensive Model of Sexual Anti-Ageing. *Journal of Aesthetic Nursing*, 9, 118–127. <https://doi.org/10.12968/joan.2020.9.3.118> [Citation Time(s):1] Sofra, X. (2020) How to get rid of visceral fat: a randomised double-blind clinical trial. *Journal of Aesthetic Nursing*, 9(7): 268–275.DOI: <https://doi.org/10.12968/joan.2020.9.7.268> Sofra, X. (2020) Gain without pain: beyond sport effortless exercise solutions. *Journal of Aesthetic Nursing*, 9(5): 202–210.DOI: <https://doi.org/10.12968/joan.2020.9.5.202> Sofra X. (2020) The Importance of Systemic Balance in Safeguarding Health: A Randomized Double-Blind Clinical Trial on VLDL, Triglycerides, Free T3,Leptin, Ghrelin, Cortisol and Visceral Adipose Tissue. *Health*, 12(8).DOI: <https://doi.org/10.4236/health.2020.128078> Sofra, X., & Lampe, N. (2020). Technological Advances in Accelerated Wound Repair and Regeneration. *Health*, 12(7), 717–737. DOI: 10.4236/health.2020.127053 Sofra, X., & Lampe, N. (2020). A Randomized Longitudinal Double-Blind Clinical Trial on Long-Term Neuropathic Symptomatology Relief & Pain Analgesia. *Health*, 12(07), 738. <http://creativecommons.org/licenses/by/4.0/> Sofra, X., Badami, S (2020). Adverse Effects of Sedentary Lifestyles: Inflammation, and High-Glucose Induced Oxidative Stress-A Double Blind Randomized Clinical Trial on Diabetic and Prediabetic Patients. *Health*, 12(08): 1029. Article ID:102260, 20 pages DOI: <https://doi.org/10.4236/health.2020.128076> Sofra, X., Lampe, N. A Randomized Longitudinal Double-Blind Clinical Trial on Long-Term Neuropathic Symptomatology Relief & Pain Analgesia. *Health*, 2020, 12(07): 738. ID:101363,12 pages DOI: 10.4236/health.2020.127054 Sofra, X., Badami, S. (2020) A Review of COVID-19 associated factors: CRP, Creatinine, Bilirubin, VLDL, HDL, Triglycerides, Cortisol and Thyroid Function. *J Endo Metabol Res*, 1(2): 1–17. https://www.maplespub.com/webroot/files/A-Review-of-COVID19-associated-factors-CRP-Creatinine-Bilirubin-VLDL-HDL-Triglycerides-Cortisol-and-Thyroid-Function_1601046593.pdf Sofra, X. Dynamics of Female Sexuality: Hidden Emotional Issues. *Health*, (2020), 12(6): 694–708.DOI: 10.4236/health.2020.126051 Sofra, X., Lampe, N. (2020) Empowering the woman: a comprehensive model of sexual anti-ageing. *Journal of Aesthetic Nursing*, , 9(3): 1127–1201. <https://doi.org/10.12968/joan.2020.9.3.118> Sofra, X. The Affinity between Obesity and COVID-19. *J Endo Metabol Res*, (2020), 1(2): 1–13. https://maplespub.com/webroot/files/The-Affinity-between-Obesity-and-COVID-19_1602748373.pdf Sofra X, Badami S. A Review of COVID19 associated factors: CRP, Creatinine, Bilirubin, VLDL, HDL,Triglycerides, Cortisol, and Thyroid Function. *J Endo Metabol Res.* (2020), 1(2):1–17. <https://maplespub.com/article/A-Re-view-of-COVID19-associated-factors-CRP-Creatinine-Bilirubin-VLDL-HDL-Triglycerides-Cortisol-and-Thyroid-Function> Sofra X (2022) Liver Repair of NAFLD patients, Following Effortless Exercise and the Possible Involvement of Endogenous Stem Cells. *Journal of Diabetes, Metabolic Disorders and Control* Sollner T, Whiteheart W, Brunner M, Erdjument-Bromage H, Geromanos S, Tempst P, Rothman JE(1993): SNAP receptor implicated in vesicle targeting and fusion. *Nature* 1993; 362:318–324. <https://www.ncbi.nlm.nih.gov/pubmed/8455717> Stroumza, N., Gauthier, N., Senet, P., Moguelet, P., Nail Barthelemy, R., & Atlan, M. (2018). Paradoxical adipose hypertrophy (PAH) after cryolipolysis. *Aesthetic Surgery Journal*, 38(4), 411–417. Takahashi, K., & Yamanaka, S. (2006). Induction of pluripotent stem cells from mouse embryonic and adult fibroblast cultures by defined factors. *cell*, 126(4), 663–676. Touni, H., & Best, T. M. (2003). The inflammatory response: friend or enemy for muscle injury?. *British journal of sports medicine*, 37(4), 284–286 Turinetto, V., Vitale, E., & Giachino, C. (2016). Senescence in human mesenchymal stem cells: functional changes and implications in stem cell-based therapy. *International journal of molecular sciences*, 17(7), 1164. Van Deursen, J. M. (2014). The role of senescent cells in ageing. *Nature*, 509(7501), 439–446. Wang, X., Li, T., Cui, T., Yu, D., Liu, C., Jiang, L., ... & Hu, B. (2018). Human embryonic stem cells contribute to embryonic and extraembryonic lineages in mouse embryos upon inhibition of apoptosis. *Cell research*, 28(1), 126–129. Wessler, I., & Kirkpatrick, C. (2008). Acetylcholine beyond neurons: the non-neuronal cholinergic system in humans. *British journal of pharmacology*, 154(8), 1558–1571. Wilson P, Ralston. Electron-Gated Ion Channels: With Amplification by N/3 Inversion Resonance. Institution of Engineering and Technology, 2005 - Science - 190 pages https://books.google.com.hk/books/about/Electron_Gated_Ion_Channels.html?id=5zaAkQhKZPOC&source=kp_cover&redir_esc=y Yao, X., Li, H., & Leng, S. X. (2011). Inflammation and immune system alterations in frailty. *Clinics in geriatric medicine*, 27(1), 79–87. Yu, A. J., Luo, Y. J., Xu, X. G., Bao, L. D., Tian, T., Li, Z. X., ... & Li, Y. H. (2018). A pilot split-scalp study of combined fractional radiofrequency microneedling and 5% topical minoxidil in treating male pattern hair loss. *Clinical and Experimental Dermatology*, 43(7), 775–781. Zhang, W., Fan, M., Wang, C., Mahawar, K., Parmar, C., Chen, W., ... & Global Bariatric Research Collaborative. (2021). Hair loss after metabolic and bariatric surgery: a systematic review and meta-analysis. *Obesity Surgery*, 31, 2649–2659 Zhu, L., & Skoutch, A. I. (2001). Coordinating cell proliferation and differentiation. *Current opinion in genetics & development*, 11(1), 91–97.

Submitter
Chen Haihua
chhsimon@sina.com - China

Presenter
Haihua Chen
chhsimon@sina.com -

#8285

High Double Eyelid Fold Correction Composite Using Fat Strip Transplantation and Pretarsal Orbicularis Oculi Flap

45 - Combination treatments

Haihua C

Background/Objectives: As the growing amount of unnatural-appearing upper eyelid after blepharoplasty, it's necessary to find suitable methods for secondary revision. This study aimed to evaluate aesthetic outcomes of surgical correction of the high fold using a pretarsal orbicularis oculi flap with fat strip transplantation.

Methods: From January 2018 to September 2023, 50 patients with high and deep double eyelid folds underwent our fold-lowering procedure. All of these patients underwent surgical correction of high folds composite using fat strip transplantation and pretarsal orbicularis oculi flap, with postoperative follow-up ranging from 6 months to 2 years. All the Postoperative outcomes were recorded and reviewed.

Results: Using the composite technique, unnatural, high, and deep double eyelid folds were converted to lower and relative natural folds. Although prior high fold incision scars could be seen postoperatively on close examination, they were not easily visible. Complications included fold height asymmetry in 5 cases, persistence of the prior fold in 6 cases, and redundant upper flap skin that needed further excision in 3 cases.

Conclusions: Secondary blepharoplasty revision to correct the high fold is a challenging procedure for plastic surgeons. Using fat strip transplantation and pretarsal orbicularis oculi flap for correction of the high fold is relatively safe and effective. This provides a new treatment option in secondary revision techniques.

Submitter
Sofra Xanya
science@iellios.com - United Kingdom

Presenter
Sofra Xanya
science@iellios.com - United Kingdom

#8287

The Exosomes Miracle. A Double-Edged Sword

51 - Regenerative aesthetics

Sofra X^{1,2}

¹City University, London, United kingdom

²New School for Social Research, New york city, United states

Background/Objectives: A review of over 300 articles examines exosomes' advantages and disadvantages. Exosomes regulate complex intracellular pathways and have been used as biomarkers, cell-free therapeutic agents, drug delivery carriers, exosome kinetics, and cancer vaccines. The complex cargo of exosomes is readily accessible via sampling of biological fluids (liquid biopsies). Proteins, metabolites, and nucleic acids delivered by exosomes into recipient cells effectively alter their biological response. Such exosome-mediated responses can be healing or the exact opposite: It can promote disease and/or aging.

Methods: The clinical application of exosomes faces various questions and challenges. In addition, exosome-based clinical trials are required to conform to specific good manufacturing practices (GMP). A GMP-grade exosome production method comprises the type of cells, culture environment, cultivation system, and culture medium. Further purification is essential after production, usually divided into three-step process. The third subject in GMP of exosomes is the establishment of characterization and identification method, comprising physical configuration and bioactivity function characteristics.

Results: Exosomes can deliver proteins, metabolites and nucleic acids into recipient cells altering their biological response and restraining or, the exact opposite, promoting the course of disease. Despite the exosomes' miraculous effects on several diseases, including cancer where exosomes are used as a vaccine, there is clinical evidence that exosomes may promote viral infection by enabling the spreading of a virus into the body. Viruses can use exosomes like a "Trojan horse" to gain access to our cells and disseminate the infection. It has been proposed that multiple viruses may package within exosomes, a process that would promote multiplicities of infection and viral genetic cooperativity. Recent studies have shown that exosomes released from bacteria-infected macrophages are pro-inflammatory. Blocking the generation of exosomes appears to be protective against sepsis-induced inflammatory response and cardiac dysfunction. Overall, the blockade of exosome generation in sepsis dampens the sepsis-triggered inflammatory response and thereby, improves cardiac function and survival.

Conclusions: Exosomes contain many constituents of a cell, including DNA, RNA, miRNAs, lipids, metabolites, cytosolic and cell-surface proteins. The physiological purpose of generating exosomes remains largely unknown. One speculated role is that exosomes likely remove excess and/or unnecessary constituents from cells to maintain cellular homeostasis. Exosomes' functional heterogeneity can result in one set of exosomes inducing cell survival, another set inducing apoptosis, and a different set inducing immunomodulation, etc. Due to their complexity, more research on exosomes is necessary.

References: Han C, Sun X, Liu L, Jiang H, Shen Y, Xu X, Li J, Zhang G, Huang J, Lin Z. Exosomes and their therapeutic potentials of stem cells. *Stem Cells Int*. 2016;2016:1–11. Wu Z, He D, Li H. Bioglass enhances the production of exosomes and improves their capability of promoting vascularization. *Bioact Mater*. 2021;6:823–35. Jafari D, Shajari S, Jafari R, Mardani N, Gomari H, Ganji F, Forouzandeh Moghadam M, Samadikuchaksaraei A. Designer exosomes: a new platform for biotechnology therapeutics. *BioDrugs*. 2020;34:567–86. Li F, Wu J, Li D, Hao L, Li Y, Yi D, Yeung KWK, Chen D, Lu WW, Pan H, et al. Engineering stem cells to produce exosomes with enhanced bone regeneration effects: an alternative strategy for gene therapy. *J Nanobiotechnol*. 2022;20:135. Wang J, Bonacquisti EE, Brown AD, Nguyen J. Boosting the biogenesis and secretion of mesenchymal stem cell-derived exosomes. *Cells*. 2020;9:660. Vakhshiteh F, Atayebi F, Ostad SN. Mesenchymal stem cell exosomes: a two-edged sword in cancer therapy. *Int J Nanomed*. 2019;14:2847. Zhou J, Tan X, Tan Y, Li Q, Ma J, Wang G. Mesenchymal stem cell derived exosomes in cancer progression, metastasis and drug delivery: a comprehensive review. *J Cancer*. 2018;9:3129. Sun L, Xu R, Sun X, Duan Y, Han Y, Zhao Y, Qian H, Zhu W, Xu W. Safety evaluation of exosomes derived from human umbilical cord mesenchymal stromal cell. *Cytotherapy*. 2016;18:413–22. Charoenviriyakul C, Takahashi Y, Morishita M, Matsumoto Y, Nishikawa M, Takakura Y. Cell type-specific and common characteristics of exosomes derived from mouse cell lines: yield, physicochemical properties, and pharmacokinetics. *Eur J Pharm Sci*. 2017;96:316–22. Yamashita T, Takahashi Y, Nishikawa M, Takakura Y. Effect of exosome isolation methods on physicochemical properties of exosomes and clearance of exosomes from the blood circulation. *Eur J Pharm Biopharm*. 2016;98:1–8. Lv LL, Wu WJ, Feng Y, Li ZL, Tang TT, Liu BC. Therapeutic application of extracellular vesicles in kidney disease: promises and challenges. *J Cell Mol Med*. 2018;22:728–37. Willis GR, Kourembanas S, Mitsialis AS. Toward exosome-based therapeutics: isolation, heterogeneity, and fit-for-purpose potency. *Front Cardiovasc Med*. 2017;4:63. Chen Y-S, Lin E-Y, Chiou T-W, Harn H-J. Exosomes in clinical trial and their production in compliance with good manufacturing practice. *Tzu Chi Med J*. 2020;32:113–20. Abou-El-Enain M, Römhild A, Kaiser D, Beier C, Bauer G, Volk H-D, Reinke P. Good Manufacturing Practices (GMP) manufacturing of advanced therapy medicinal products: a novel tailored model for optimizing production and estimating costs. *Cytotherapy*. 2013;15:362–83. Suharta S, Barlian A, Hidayah AC, Notobroto HB, Ana ID, Indriani S, Wungu TDK, Wijaya CH. Plant-derived exosome-like nanoparticles: a concise review on its extraction methods, content, bioactivities, and potential as functional food ingredient. *J Food Sci*. 2021;86:2838–50. Teng Y, Xu F, Zhang X, Mu J, Sayed M, Hu X, Lei C, Sriwastwa M, Kumar A, Sundaram K. Plant-derived exosomal microRNAs inhibit lung inflammation induced by exosomes SARS-CoV-2 Nsp12. *Mol Ther*. 2021;29:2424–40. Xu Z, Zeng S, Gong Z, Yan Y. Exosome-based immunotherapy: a promising approach for cancer treatment. *Mol Cancer*. 2020;19:160. Tran T-H, Mattheolabakis G, Aldawsari H, Amiji M. Exosomes as nanocarriers for immunotherapy of cancer and inflammatory diseases. *Clin Immunol*. 2015;160:45–88. Mignot G, Roux S, Thery C, Ségura E, Zitvogel L. Prospects for exosomes in immunotherapy of cancer. *J Cell Mol Med*. 2006;10:376–88. Galbo PM Jr, Ciesielski MJ, Figel S, Maguire O, Qiu J, Wiltse L, Minderman H, Fenstermaker RA. Circulating CD9+GAP+survivin+ exosomes in malignant glioma patients following survivin vaccination. *Oncotarget*. 2017;8:114722. Sharma A, Johnson A. Exosome DNA: Critical regulator of tumor immunity and a diagnostic biomarker. *J Cell Physiol*. 2020;235:1921–32. Bell BM, Kirk ID, Hiltbrunner S, Gabriellson S, Bultema JJJ. Designer exosomes as next-generation cancer immunotherapy. *Nanomed Nanotechnol Biol Med*. 2016;12:163–9. Escudier B, Dorval T, Chaput N, André F, Caby M-P, Novault S, Flament C, Leblouaie C, Borg C, Amigorena S. Vaccination of metastatic melanoma patients with autologous dendritic cell (DC) derived-exosomes: results of the first phase I clinical trial. *J Transl Med*. 2005;3:1–13. Morse MA, Garst J, Osada T, Khan S, Hobeika A, Clay TM, Valente N, Shreenivas R, Sutton MA, Delcayre A. A phase I study of dextran immunotherapy in patients with advanced non-small cell lung cancer. *J Transl Med*. 2005;3:1–8. Besse B, Charrier M, Lapierre V, Dansin E, Lantz O, Planchard D, Le Chevalier T, Livartowski A, Barlesi F, Laplanche A. Dendritic cell-derived exosomes as maintenance immunotherapy after first line chemotherapy in NSCLC. *Oncoimmunology*. 2016;5:e1071008. Marie-Cardine A, Vialat N, Thomart N, Joly R, Chanteux S, Gauthier L, Bonnafont C, Rossi B, Bléry M, Patrel C, et al. IPH4102, a humanized KIR3DL2 antibody with potent activity against cutaneous T-cell lymphoma. *Clin Res*. 2014;74:6060–70. Katakowski M, Chopp M. Exosomes as tools to suppress primary brain tumor. *Cell Mol Neurobiol*. 2016;36:343–52. Patel GK, Khan MA, Zubair H, Srivastava SK, Khushman M, Singh S, Singh AP. Comparative analysis of exosome isolation methods using culture supernatant for optimum yield, purity and downstream applications. *Sci Rep*. 2019;9:1–10. He L, Zhu D, Wang J, Wu X. A highly efficient method for isolating urinary exosomes. *Int J Mol Med*. 2019;43:83–90. Clayton S, Al-Taei J, Webber M, D. Mason, Z. Tabi. Cancer exosomes express CD39 and CD73, which suppress T cells through adenosine production. *J. Immunol*. 187, 676–683 (2011). 10.4049/jimmunol.1003884 32. 88 D. Skokos, S. Le Panse, I. Villa, J.-C. Rousselte, R. Peronet, B. David, A. Namané, S. Mécheri, Mast cell-dependent B and T lymphocyte activation is mediated by the secretion of immunologically active exosomes. *J. Immunol*. 166, 868–876 (2001). 10.4049/jimmunol.166.2.868 34. 89 J. Wang, L. Wang, Z. Lin, L. Tao, M. Chen, More efficient induction of antitumor T cell immunity by exosomes from CD40L gene-modified lung tumor cells. *Mol. Med. Rep.* 9, 125–131 (2014). 10.3892/mmr.2013.1759 36. 90 M. Capello, J. V. Vykoukal, H. Katayama, L. E. Bantis, H. Wang, D. L. Kundnani, C. Aguilar-Bonavides, M. Aguilar, S. C. Tripathi, D. S. Dhillon, A. A. Momin, H. Peters, M. H. Katz, H. Alvarez, V. Bernard, S. Ferri-Borgogno, R. Brand, D. G. Adler, M. A. Firpo, S. J. Mulvihill, J. J. Mollred, Z. Feng, A. Taguchi, A. Maitra, S. M. Hanash, Exosomes harbor B cell targets in pancreatic adenocarcinoma and exert decoy function against complement-mediated cytotoxicity. *Nat. Commun*. 10, 254 (2019). 10.1038/s41467-018-08109-6 38. 91 F. Chalmis, S. Ladoire, G. Mignot, J. Vincent, M. Bruchard, J.-P. Remy-Martin, V. Boireau, A. Rouleau, B. Simon, D. Lanneau, A. De Thonel, G. Multhoff, A. Hamman, F. Martin, B. Chaffuett, E. Solary, L. Zitvogel, C. Garrido, B. Ryffel, C. Borg, L. Apetoh, C. Rebé, F. Ghiringhelli, Membrane-associated Hsp72 from tumor-derived exosomes mediates STAT3-dependent immunosuppressive function of mouse and human myeloid-derived suppressor cells. *J. Clin. Invest.* 120, 457–471 (2010). 10.1172/JCI40483 40. 92 K. Gabrusiewicz, X. Li, J. Wei, Y. Hashimoto, A. L. Marisety, M. Ott, F. Wang, D. Hawke, J. Yu, L. M. Healy, A. Hossain, J. C. Akers, S. N. Maiti, S. Yamashita, Y. Shimizu, K. Dunner, M. A. Zal, J. K. Burks, J. Gumin, F. Nwajee, A. Rezavani, S. Zhou, G. Rao, R. Sawaya, G. N. Fuller, J. T. Huse, J. P. Antel, S. Li, L. Cooper, E. P. Sulman, C. Chen, C. Geula, R. Kalluri, T. Zal, A. B. Heimberger, Glioblastoma stem cell-derived exosomes induce M2 macrophages and PD-L1 expression on human monocytes. *Oncoimmunology* 7, e1412909 (2018). 10.1080/2162402X.2017.1412909 42. 93 M. Fabbri, A. Paone, F. Calore, R. Galli, E. Gaudio, R. Santhanam, F. Lovat, P. Fadda, C. Mao, G. J. Nuovo, N. Zanetti, M. Crawford, G. H. Ozer, D. Wernicke, H. Alder, M. A. Caligiuri, P. Nana-Sinkam, D. Perrotti, C. M. Croce, MicroRNAs bind to Toll-like receptors to induce prometastatic inflammatory response. *Proc. Natl. Acad. Sci. U.S.A.* 109, E2110–E2116 (2012). 10.1073/pnas.1209414109 44. 94 S. G. van der Grein, K. A. Y. Defourny, E. F. J. Slot, E. N. M. Nolte-Hoën, Intricate relationships between naked viruses and extracellular vesicles in the crosstalk between pathogen and host. *Semin. Immunopathol*. 40, 491–504 (2018). 10.1007/s00281-018-0678-9 46. 95 B. J. Crenshaw, L. Gu, B. Sims, Q. L. Matthews, Exosome biogenesis and biological function in response to viral infections. *Open Virol. J.* 12, 134–148 (2018). 10.2174/1874357901812010134 48. 96 Z. Feng, L. Hensley, K. L. McKnight, F. Hu, V. Madden, L. Ping, S.-H. Jeong, C. Walker, R. E. Lanford, S. M. Lemon, A pathogenic picornavirus acquires an envelope by hijacking cellular membranes. *Nature* 496, 367–371 (2013). 10.1038/nature12029 50. 97 S. Nagashima, S. Jirintai, M. Takahashi, T. Kobayashi, T. Tanggis, T. Nishizawa, T. Kouki, T. Yashiro, H. Okamoto, Hepatitis E virus egress depends on the exosomal pathway, with secretory exosomes derived from multivesicular bodies. *J. Gen. Virol.* 95, 2166–2175 (2014). 10.1099/vir.0.066910-0 52. 98 S. J. Gould, A. M. Booth, J. E. Hildreth, The Trojan exosome hypothesis. *Proc. Natl. Acad. Sci. U.S.A.* 100, 10592–10597 (2003). 10.1073/pnas.1831413100 54. 99 N. Altan-Bonnet, Extracellular vesicles are the Trojan horses of viral infection. *Curr. Opin. Microbiol.* 32, 77–81 (2016). 10.1016/j.mib.2016.05.004 56. 100 V. Ramakrishnaiah, C. Thumann, I. Fofana, F. Habersetzer, Q. Pan, P. E. de Ruiter, R. Willemsen, J. A. A. Demmers, V. Stalín Raj, G. Jenster, J. Kwekkeboom, H. W. Tilanus, B. L. Haagmans, T. F. Baumert, L. J. W. van der Laan, Exosome-mediated transmission of hepatitis C virus between human hepatoma Huh7.5 cells. *Proc. Natl. Acad. Sci. U.S.A.* 110, 13109–13113 (2013). 10.1073/pnas.1221899110 58. 101 B. Sims, A. L. Farrow, S. D. Williams, A. Bansal, A. Krendelchikov, Q. L. Matthews, Tetraspanin blockade reduces exosome-mediated HIV-1 entry. *Arch. Virol.* 163, 1683–1689 (2018). 10.1007/s00705-018-3737-6 102 M. Lenassi, G. Cagney, M. Liao, T. Vaupotić čng, K. Bartholomeusen, Y. Cheng, N. J. Krogan, A. Plemenitaš, B. M. Peterlin, HIV Nef is secreted in exosomes and triggers apoptosis in bystander CD4+ T cells. *Traffic* 11, 110–122 (2010). 10.1111/j.1600-0854.2009.01006.x 62. 103 D. M. Pegtel, K. Cosmopoulos, D. A. Thorley-Lawson, M. A. J. van Eijndhoven, E. S. Hoppmans, J. L. Lindenberg, T. D. de Gruij, T. Würdinger, J. M. Middeldorp, Functional delivery of viral miRNAs via exosomes. *Proc. Natl. Acad. Sci. U.S.A.* 107, 6328–6333 (2010). 10.1073/pnas.0914843107 136. 104 B. Sims, A. L. Farrow, S. D. Williams, A. Bansal, A. Krendelchikov, L. Gu, Q. L. Matthews, Role of TIM-4 in exosome-dependent entry of HIV-1 into human immune cells. *Int. J. Nanomedicine* 12, 4823–4833 (2017). 10.2147/IJN.S132762 66. 105 L. Gao, L. Wang, T. Dai, K. Jin, Z. Zhang, S. Wang, F. Xie, P. Fang, B. Yang, H. Huang, H. van Dam, F. Zhou, L. Zhang, Tumor-derived exosomes antagonize innate antiviral immunity. *Nat. Immunol.* 19, 233–245 (2018). 10.1038/s41590-017-0043-5 68. 106 J. Li, K. Liu, Y. Liu, Y. Xu, F. Zhang, H. Yang, J. Liu, T. Chen, M. Wu, X. Zhou, Z. Yuan, Exosomes mediate the cell-to-cell transmission of IFN-α-induced antiviral activity. *Nat. Immunol.* 14, 793–803 (2013). 10.1038/ni.2647 70. 107 A. K. Khata, H. E. Taylor, J. E. Hildreth, W. Popik, Exosomes packaging APOBEC3G confer human immunodeficiency virus resistance to recipient cells. *J. Virol.* 83, 512–521 (2009). 10.1128/JVI.01658-08 72. 108 J. V. de Carvalho, R. O. de Castro, E. Z. M. da Silva, P. P. Silveira, M. E. da Silva-Januário, E. Arruda, M. C. Jamur, C. Oliver, R. S. Aguiar, L. L. P. daSilva, Nef neutralizes the ability of exosomes from CD4+ T cells to act as decoys during HIV-1 infection. *PLOS ONE* 9, e113691 (2014). 10.1371/journal.pone.0113691 74. 109 C. Guay, R. Regazzi, Exosomes as new players in metabolic organ cross-talk. *Diabetes Obes. Metab.* 19(Suppl 1), 137–146 (2017). 10.1111/dom.13027 76. 110 Z. B. Deng, A. Poliakov, R. W. Hardy, R. Clements, C. Liu, Y. Liu, J. Wang, X. Zhang, S. Zhang, X. Zhuang, S. V. Shah, D. Sun, S. Michalek, W. E. Grizzle, T. Garvey, J. Mobley, H.-G. Zhang, Adipose tissue exosome-like vesicles mediate activation of macrophage-induced insulin resistance. *Diabetes* 58, 2498–2505 (2009). 10.2337/db09-0216 78. 111 C. Castaño, S. Kalko, A. Novials, M. Párrizas, Obesity-associated exosomal miRNAs modulate glucose and lipid metabolism in mice. *Proc. Natl. Acad. Sci. U.S.A.* 115, 12158–12163 (2018). 10.1073/pnas.1808855115 80. 112 S. V. Chitti, P. Fonseka, S. Mathivanan, Emerging role of extracellular vesicles in mediating cancer cachexia. *Biochem. Soc. Trans.* 46, 1129–1136 (2018). 10.1042/BSOT20180213 82. 113 G. Sagar, R. P. Sah, N. Javed, S. K. Dutta, T. C. Smyrk, J. S. Lau, N. Giorghade, T. Tchekonia, J. L. Kirkland, S. T. Chari, D. Mukhopadhyay, Pathogenesis of pancreatic cancer exosome-induced lipolysis in adipose tissue. *Gut* 65, 1165–1174 (2016). 10.1136/gutjnl-2014-308350 84. 114 N. Javed, G. Sagar, S. K. Dutta, T. C. Smyrk, J. S. Lau, S. Bhattacharya, M. Truty, G. M. Petersen, R. J. Kaufman, S. T. Chari, D. Mukhopadhyay, Pancreatic cancer-derived exosomes cause paraneoplastic β-cell dysfunction. *Clin. Cancer Res.* 21, 1722–1733 (2015). 10.1158/1078-0432.CCR-14-2022 86. 115 G. Zhang, Z. Liu, H. Ding, Y. Zhou, H. A. Doan, K. W. T. Sin, Z. J. Zhu, R. Flores, Y. Wen, X. Gong, Q. Liu, Y.-P. Li, Tumor induces muscle wasting in mice through releasing extracellular Hsp70 and Hsp90. *Nat. Commun.* 8, 589 (2017). 10.1038/s41467-017-00726-x 88. 116 Y. Zhang, Y. W. Hu, L. Zheng, Q. Wang, Characteristics and roles of exosomes in cardiovascular disease. *DNA Cell Biol.* 36, 202–211 (2017). 10.1089/dna.2016.3496 90. 117 S. Srikanthan, W. Li, R. L. Silverstein, T. M. McIntyre, Exosome poly-ubiquitin inhibits platelet activation, downregulates CD36 and inhibits pro-atherothrombotic cellular functions. *J. Thromb. Haemost.* 12, 1906–1917 (2014). 10.1111/jth.12712 92. 118 A. N. Kapustin, M. Schoppert, L. J. Schurgers, J. L. Reynolds, R. McNair, A. Heiss, W. Jahnke-Dechent, T. M. Hackeng, G. Schlieper, P. Harrison, C. M. Shanahan, Prothrombin loading of vascular smooth muscle cell-derived exosomes regulates coagulation and calcification. *Arterioscler. Thromb. Vasc. Biol.* 37, e22–e32 (2017). 10.1161/ATVBAHA.116.308886 94. 119 Y. Pan, W. Du, J. Liu, W. Ma, L. Zhang, Z. Du, B. Cai, Stem cell-derived exosome in cardiovascular diseases: Macro roles of micro particles. *Front. Pharmacol.* 9, 547 (2018). 10.3389/fphar.2018.00547 96. 120 J. Xiao, Y. Pan, H. Li, X. Yang, Y. Li, F. Peng, H. H. Tan, L. Jiang, J. Feng, X. Y. Yu, Cardiac progenitor cell-derived exosomes prevent cardiomyocytes apoptosis through exosomal miR-21 by targeting PDCD4. *Cell Death Dis.* 7, e2277 (2016). 10.1038/cddis.2016.181 98. 121 Y. Feng, W. Huang, M. Wani, X. Yu, M. Ashraf, Ischemic preconditioning potentiates the protective effect of stem cells through secretion of exosomes by targeting Mecp2 via miR-22. *PLOS ONE* 9, e88685 (2014). 10.1371/journal.pone.0088685 100. 122 J. Mayourian, D. K. Ceholski, P. A. Gorski, P. Mathiyalagan, J. F. Murphy, S. I. Salazar, F. Stilitano, J. M. Hare, S. Sahoo, R. J. Hajjar, K. C. Costa, Exosomal microRNA-21-5p mediates mesenchymal stem cell paracrine effects on human cardiac tissue contractility. *Circ. Res.* 122, 933–944 (2018). 10.1161/CIRCRESAHA.118.312420 102. 123 V. Budnik, D. Ruiz-Cañada, F. Wendler, Extracellular vesicles round off communication in the nervous system. *Nat. Rev. Neurosci.* 17, 160–172 (2016). 10.1038/nrn.2015.29 104. 124 C. Quek, A. F. Hill, The role of extracellular vesicles in neurodegenerative diseases. *Biochem. Biophys. Res. Commun.* 483, 1178–1186 (2017). 10.1016/j.bbrc.2016.09.090 106. 125 L. Yuan, J. Y. Li, Exosomes in Parkinson's disease: Current perspectives and future challenges. *ACS Chem. Neurosci.* 10, 964–972 (2019). 10.1021/acscchemneuro.8b00460 K. Gabrusiewicz, X. Li, J. Wei, Y. Hashimoto, A. L. Marisety, M. Ott, F. Wang, D. Hawke, J. Yu, L. M. Healy, A. Hossain, J. C. Akers, S. N. Maiti, S. Yamashita, Y. Shimizu, K. Dunner, M. A. Zal, J. K. Burks, J. Gumin, F. Nwajee, A. Rezavani, S. Zhou, G. Rao, R. Sawaya, G. N. Fuller, J. T. Huse, J. P. Antel, S. Li, L. Cooper, E. P. Sulman, C. Chen, C. Geula, R. Kalluri, T. Zal, A. B. Heimberger, Glioblastoma stem cell-derived exosomes induce M2 macrophages and PD-L1 expression on human monocytes. *Oncoimmunology* 7, e1412909 (2018). 10.1080/2162402X.2017.1412909 114. 93 M. Fabbri, A. Paone, F. Calore, R. Galli, E. Gaudio, R. Santhanam, F. Lovat, P. Fadda, C. Mao, G. J. Nuovo, N. Zanetti, M. Crawford, G. H. Ozer, D. Wernicke, H. Alder, M. A. Caligiuri, P. Nana-Sinkam, D. Perrotti, C. M. Croce, MicroRNAs bind to Toll-like receptors to induce prometastatic inflammatory response. *Proc. Natl. Acad. Sci. U.S.A.* 109, E2110–E2116 (2012). 10.1073/pnas.1209414109 116. 94 S. G. van der Grein, K. A. Y. Defourny, E. F. J. Slot, E. N. M. Nolte-Hoën, Intricate relationships between naked viruses and extracellular vesicles in the crosstalk between pathogen and host. *Semin. Immunopathol*. 40, 491–504 (2018). 10.1007/s00281-018-0678-9 118. 95 B. J. Crenshaw, L. Gu, B. Sims, Q. L. Matthews, Exosome biogenesis and biological function in response to viral infections. *Open Virol. J.* 12, 134–148 (2018). 10.2174/1874357901812010134 120. 96 Z. Feng, L. Hensley, K. L. McKnight, F. Hu, V. Madden, L. Ping, S.-H. Jeong, C. Walker, R. E. Lanford, S. M. Lemon, A pathogenic picornavirus acquires an envelope by hijacking cellular membranes. *Nature* 496, 367–371 (2013). 10.1038/nature12029 122. 97 S. Nagashima, S. Jirintai, M. Takahashi, T. Kobayashi, T. Tanggis, T. Nishizawa, T. Kouki, T. Yashiro, H. Okamoto, Hepatitis E virus egress depends on the exosomal pathway, with secretory exosomes derived from multivesicular bodies. *J. Gen. Virol.* 95, 2166–2175 (2014). 10.1099/vir.0.066910-0 124. 98 S. J. Gould, A. M. Booth, J. E. Hildreth, The Trojan exosome hypothesis. *Proc. Natl. Acad. Sci. U.S.A.* 100, 10592–10597 (2003). 10.1073/pnas.1831413100 126. 99 N. Altan-Bonnet, Extracellular vesicles are the Trojan horses of viral infection. *Curr. Opin. Microbiol.* 32, 77–81 (2016). 10.1016/j.mib.2016.05.004 128. 100 V. Ramakrishnaiah, C. Thumann, I. Fofana, F. Habersetzer, Q. Pan, P. E. de Ruiter, R. Willemsen, J. A. A. Demmers, V. Stalín Raj, G. Jenster, J. Kwekkeboom, H. W. Tilanus, B. L. Haagmans, T. F. Baumert, L. J. W. van der Laan, Exosome-mediated transmission of hepatitis C virus between human hepatoma Huh7.5 cells. *Proc. Natl. Acad. Sci. U.S.A.* 110, 13109–13113 (2013). 10.1073/pnas.1221899110 130. 101 B. Sims, A. L. Farrow, S. D. Williams, A. Bansal, A. Krendelchikov, Q. L. Matthews, Tetraspanin blockade reduces exosome-mediated HIV-1 entry. *Arch. Virol.* 163, 1683–1689 (2018). 10.1007/s00705-018-3737-6 132. 102 M. Lenassi, G. Cagney, M. Liao, T. Vaupotić čng, K. Bartholomeusen, Y. Cheng, N. J. Krogan, A. Plemenitaš, B. M. Peterlin, HIV Nef is secreted in exosomes and triggers apoptosis in bystander CD4+ T cells. *Traffic* 11, 110–122 (2010). 10.1111/j.1600-0854.2009.01006.x 134. 103 D. M. Pegtel, K. Cosmopoulos, D. A. Thorley-Lawson, M. A. J. van Eijndhoven, E. S. Hoppmans, J. L. Lindenberg, T. D. de Gruij, T. Würdinger, J. M. Middeldorp, Functional delivery of viral miRNAs via exosomes. *Proc. Natl. Acad. Sci. U.S.A.* 107, 6328–6333 (2010). 10.1073/pnas.0914843107 136. 104 B. Sims, A. L. Farrow, S. D. Williams, A. Bansal, A. Krendelchikov, L. Gu, Q. L. Matthews, Role of TIM-4 in exosome-dependent entry of HIV-1 into human immune cells. *Int. J. Nanomedicine* 12, 4823–4833 (2017). 10.2147/IJN.S132762 138. 105 L. Gao, L. Wang, T. Dai, K. Jin, Z. Zhang, S. Wang, F. Xie, P. Fang, B. Yang, H. Huang, H. van Dam, F. Zhou, L. Zhang, Tumor-derived exosomes antagonize innate antiviral immunity. *Nat. Immunol.* 19, 233–245 (2018). 10.1038/s41590-017-0043-5 140. 106 J. Li, K. Liu, Y. Liu, Y. Xu, F. Zhang, H. Yang, J. Liu, T. Chen, M. Wu, X. Zhou, Z. Yuan, Exosomes mediate the cell-to-cell transmission of IFN-α-induced antiviral activity. *Nat. Immunol.* 14, 793–803 (2013). 10.1038/ni.2647 142. 107 A. K. Khata, H. E. Taylor, J. E. Hildreth, W. Popik, Exosomes packaging APOBEC3G confer human immunodeficiency virus resistance to recipient cells. *J. Virol.* 83, 512–521 (2009). 10.1128/JVI.01658-08 144. 108 J. V. de Carvalho, R. O. de Castro, E. Z. M. da Silva, P. P. Silveira, M. E. da Silva-Januário, E. Arruda, M. C. Jamur, C. Oliver, R. S. Aguiar, L. L. P. daSilva, Nef neutralizes the ability of exosomes from CD4+ T cells to act as decoys during HIV-1 infection. *PLOS ONE* 9, e113691 (2014). 10.1371/journal.pone.0113691 146. 109 C. Guay, R. Regazzi, Exosomes as new players in metabolic organ cross-talk. *Diabetes Obes. Metab.* 19(Suppl 1), 137–146 (2017). 10.1111/dom.13027 148. 110 Z. B. Deng, A. Poliakov, R. W. Hardy, R. Clements, C. Liu, Y. Liu, J. Wang, X. Zhang, S. Zhang, X. Zhuang, S. V. Shah, D. Sun, S. Michalek, W. E. Grizzle, T. Garvey, J. Mobley, H.-G. Zhang, Adipose tissue exosome-like vesicles mediate activation of macrophage-induced insulin resistance. *Diabetes* 58, 2498–2505 (2009). 10.2337/db09-0216 150. 111 C. Castaño, S. Kalko, A. Novials, M. Párrizas, Obesity-associated exosomal miRNAs modulate glucose and lipid metabolism in mice. *Proc. Natl. Acad. Sci. U.S.A.* 115, 12158–12163 (2018). 10.1073/pnas.1808855115 152. 112 S. V. Chitti, P. Fonseka, S. Mathivanan, Emerging role of extracellular vesicles in mediating cancer cachexia. *Biochem. Soc. Trans.* 46, 1129–1136 (2018). 10.1042/BSOT20180213 154. 113 G. Sagar, R. P. Sah, N. Javed, S. K. Dutta, T. C. Smyrk, J. S. Lau, N. Giorghade, T. Tchekonia, J. L. Kirkland, S. T. Chari, D. Mukhopadhyay, Pathogenesis of pancreatic cancer exosome-induced lipolysis in adipose tissue. *Gut* 65, 1165–1174 (2016). 10.1136/gutjnl-2014-308350 156. 114 N. Javed, G. Sagar, S. K. Dutta, T. C. Smyrk, J. S. Lau, S. Bhattacharya, M. Truty, G. M. Petersen, R. J. Kaufman, S. T. Chari, D. Mukhopadhyay, Pancreatic cancer-derived exosomes cause paraneoplastic β-cell dysfunction. *Clin. Cancer Res.* 21, 1722–1733 (2015). 10.1158/1078-0432.CCR-14-2022 A. Clayton, S. Al-Taei, J. Webber, M. D. Mason, Z. Tabi, Cancer exosomes express CD39 and CD73, which suppress T cells through adenosine production. *J. Immunol*. 187, 676–683 (2011). 10.4049/jimmunol.1003884 D. Skokos, S. Le Panse, I. Villa, J.-C. Rousselte, R. Peronet, B. David, A. Namané, S. Mécheri, Mast cell-dependent B and T lymphocyte activation is mediated by the secretion of immunologically active exosomes. *J. Immunol*. 166, 868–876 (2001). 10.4049/jimmunol.166.2.868 J. Wang, L. Wang, Z. Lin, L. Tao, M. Chen, More efficient induction of antitumor T cell immunity by exosomes from CD40L gene-modified lung tumor cells. *Mol. Med. Rep.* 9, 125–131 (2014). 10.3892/mmr.2013.1759 M. Capello, J. V. Vykoukal, H. Katayama, L. E. Bantis, H. Wang, D. L. Kundnani, C. Aguilar-Bonavides, M. Aguilar, S. C. Tripathi, D. S. Dhillon, A. A. Momin, H. Peters, M. H. Katz, H. Alvarez, V. Bernard, S. Ferri-Borgogno, R. Brand, D. G. Adler, M. A. Firpo, S. J. Mulvihill, J. J. Mollred, Z. Feng, A. Taguchi, A. Maitra, S. M. Hanash, Exosomes harbor B cell targets in pancreatic adenocarcinoma and exert decoy function against complement-mediated cytotoxicity. *Nat. Commun*. 10, 254 (2019).

10.1038/s41467-018-08109-6 F. Chalmin, S. Ladoire, G. Mignot, J. Vincent, M. Bruchard, J.-P. Remy-Martin, W. Boireau, A. Rouleau, B. Simon, D. Lanneau, A. De Thonel, G. Multhoff, A. Hamman, F. Martin, B. Chauffert, E. Solary, L. Zitvogel, C. Garrido, B. Ryffel, C. Borg, L. Apetoh, C. Rébé, F. Ghiringhelli, Membrane-associated Hsp72 from tumor-derived exosomes mediates STAT3-dependent immunosuppressive function of mouse and human myeloid-derived suppressor cells. *J. Clin. Invest.* 120, 457–471 (2010). 10.1172/JCI40483

Submitter
Sofra Xanya
science@iellios.com - United Kingdom

Presenter
Sofra Ph.d Xanya
science@iellios.com - United Kingdom

#8289

The Gray Two-Sided Reality of Stem Cells

51 - Regenerative aesthetics

Sofra Ph.d X^{1,2}

¹City University, London, United kingdom

²New School for Social Research, New york city, United states

Background/Objectives: Improving social awareness about the advantages and adverse effects of stem cell therapy is required based on research that examines both sides of the coin, short and long term advantages and disadvantages. One of the most challenging parts of the process of incorporating stem cells into clinical practice is controlling their division and differentiation potentials. Sometimes, their potential for uncontrolled growth will make these cells tumorigenic. Additionally, while stem cells can easily differentiate into a wide variety of cells, a paracrine effect controlled activity, being in an appropriate medium will cause abnormal differentiation leading to treatment failure. Another caveat in this process is immunorejection and the potentially deleterious new methods developed with arresting immune surveillance to enhance systemic acceptance and utility of stem cell implants. Incapacitating the immune system with antibodies that block normal T-cell activation even temporarily may win the battle over immunorejection but lose the war over tumours growing unobstructed since the immune soldiers are paralyzed. Stem cells offer tantalizing prospects to anti-ageing and regenerative medicine. They are used for skin repair, hair growth and the maintenance of various adult tissues and organs. They can modulate numerous incurable diseases such as heart conditions, diabetes, brain injuries etc

Methods: The coin has two sides, and stem cells advocates focus on the positive one– the miracles of transplanting stem cells to cure a variety of diseases, without bona fide evidence from large well-controlled studies or longitudinal research with proven validity and reliability that will accurately delineate the long term advantages and disadvantages of these procedures. Even mesenchymal stem cells (MSCs) which are relatively safe from malignant transformations, and do not stir up ethical controversies, have limited clinical usefulness due to cellular senescence that impairs their differentiation potential leading to uncontrolled proliferation and tumour formation. Ageing is not the only process that diminishes the function of MSCs. Their phenotype is affected by the donors' heterogeneity, the culture condition, and the cell passage in the body.

Results: The necessary process for stem cells functionality, cellular differentiation, depends on the increased ratio between: 1/ mitochondrial differential that promotes activity, and 2/ nuclear differentiation that prevents activity. Embryonic stem cells have a low ratio and therefore a compromised differentiation potential, due to low mitochondrial content. Mutations in nuclear genes coding for mitochondrial proteins decrease the differentiation rate leading to neoplastic growth, another word for tumours that may be benign or malignant cancers.

Conclusions: Proliferation and differentiation are like a seesaw: when one goes up the other goes down. Differentiation decreases with age, therefore, cellular proliferation should increase, which is why cancers are usually age-related. However, the general understanding in the stem cell industry is that the body's supply of stem cells decreases with age. This research does not accurately examine a/ whether it is proliferation that decreases which may be actually beneficial because differentiation will be more efficient b/ whether senescence affects the overall functionality of stem cells leading to compromised utilization of stem cell implants

References: Faiella, W., & Atoui, R. (2016). Therapeutic use of stem cells for cardiovascular disease. *Clinical and translational medicine*, 5(1), 1-8. Hsuan, Y. C. Y., Lin, C. H., Chang, C. P., & Lin, M. T. (2016). Mesenchymal stem cell-based treatments for stroke, neural trauma, and heat stroke. *Brain and behavior*, 6(10), e00526. Park, J. S., Kim, H. Y., Kim, H. W., Chae, G. N., Oh, H. T., Park, J. Y., ... & Kwak, S. J. (2005). Increased caveolin-1, a cause for the declined adipogenic potential of senescent human mesenchymal stem cells. *Mechanisms of ageing and development*, 126(5), 551-559. Turinetto, V., Vitale, E., & Giachino, C. (2016). Senescence in human mesenchymal stem cells: functional changes and implications in stem cell-based therapy. *International journal of molecular sciences*, 17(7), 1164. Duscher, D., Rennert, R. C., Janusz, M., Anghel, E., Maan, Z. N., Whittam, A. J., ... & Gurtner, G. C. (2014). Aging disrupts cell subpopulation dynamics and diminishes the function of mesenchymal stem cells. *Scientific reports*, 4(1), 7144. Wang, X., Li, T., Cui, T., Yu, D., Liu, C., Jiang, L., ... & Hu, B. (2018). Human embryonic stem cells contribute to embryonic and extraembryonic lineages in mouse embryos upon inhibition of apoptosis. *Cell research*, 28(1), 126-129. Fujita, J., Crane, A. M., Souza, M. K., Dejosez, M., Kyba, M., Flavell, R. A., ... & Zwaka, T. P. (2008). Caspase activity mediates the differentiation of embryonic stem cells. *Cell stem cell*, 2(6), 595-601. Chen, G., Hou, Z., Gulbranson, D. R., & Thomson, J. A. (2010). Actin-myosin contractility is responsible for the reduced viability of dissociated human embryonic stem cells. *Cell stem cell*, 7(2), 240-248. Peng, Y., Ma, A., Xiao, Z., Hao, J., Feng, R., Wang, C., ... & Zhao, T. (2023). Technical specifications for ethics review of human stem cell research. *Cell Proliferation*, e13556. Zhu, L., & Skoultschi, A. I. (2001). Coordinating cell proliferation and differentiation. *Current opinion in genetics & development*, 11(1), 91-97. Haworth, R., & Sharpe, M. (2021). Accept or reject: the role of immune tolerance in the development of stem cell therapies and possible future approaches. *Toxicologic Pathology*, 49(7), 1308-1316. The Nobel Prize in Physiology or Medicine 2012. NobelPrize.org. Nobel Prize Outreach AB 2024. Wed. 28 Feb 2024. <https://www.nobelprize.org/prizes/medicine/2012/summary> Takahashi, K., & Yamanaka, S. (2006). Induction of pluripotent stem cells from mouse embryonic and adult fibroblast cultures by defined factors. *cell*, 126(4), 663-676. Ovadya, Y., Landsberger, T., Leins, H., Vadai, E., Gal, H., Biran, A., ... & Krizhanovsky, V. (2018). Impaired immune surveillance accelerates accumulation of senescent cells and ageing. *Nature communications*, 9(1), 5435. Michaloglou, C. et al. BRAFE600-associated senescence-like cell cycle arrest of human naevi. *Nature* 436, 720-724 (2005)

Submitter
Verma Natasha
drnatashaverma@hotmail.com - United Kingdom

Presenter
Verma Natasha
drnatashaverma@hotmail.com - United Kingdom

#8293

Can a safe and standardised protocol be devised with Botulinum Toxin treatment for patients with facial-palsy-related sequelae?

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Verma N¹

¹Queen Mary, University of London/Skin NV, London, United kingdom

Background/Objectives: Background: Multiple studies prove that the quality of life of a facial nerve palsy patient improves significantly following non-surgical treatment, including but not limited to Botulinum toxin and physical therapy. However, there are only six facial nerve centres within the UK offering these treatment modalities for facial nerve palsy sufferers. This results in long waiting lists and as a result, the patients receive delayed treatment with little or no support and reassurance during the initial onset. Aims and objectives: By improving the accessibility of these treatment modalities would allow for a reduction in waiting times, for the patients to receive treatment efficiently and for the provision of advice and guidance ensuring the mental well-being of many facial nerve palsy patients. Before we can consider improving accessibility in peripheral centres, a standardised management protocol needs to be devised to ensure that multi-disciplinary professionals are providing well-rounded care for facial palsy patients.

Methods: Material and methods: An electronic database search was performed in PubMed to identify literature that allows for the development of a treatment protocol for facial nerve palsy patients. The search terms used were ((Botulinum Toxin) AND (treatment of facial palsy)). Filters used: Publication within 5 years only i.e., between 2016 and 2021. 96 results. Available Full English texts used only. Children-related and/or surgical studies were excluded.

Results: Results: Botulinum toxin therapy and physical rehabilitation have been proven to be useful in the management of facial nerve palsy. This study has enabled a protocol to be devised with regards to neuromuscular retraining (NMR) six months post-onset, and botulinum toxin therapy six months post-commencement of NMR. Sunnybrook facial grading system and House-Brackmann scales are currently the most reliable and most commonly used tools, whilst Synkinesis Assessment questionnaire and Body Image Quality of Life Inventory are the most useful patient-reported tools and quality of life assessment tools. Treatment approaches for each facial nerve palsy sequelae within non-flaccid and flaccid facial palsy cases, injection sites and doses have been discussed using the administration of slow injections and conservative dosages, minimising adverse effects.

Conclusions: Conclusion: A requirement for a standardised protocol has been identified however there are many areas within this field whereby there is a severe lack of data, therefore further high-level research is required.

References:References: 1) de Carvalho VF, Vieira APS, Paggiaro AO, Salles AG, Gemperli R. Evaluation of the body image of patients with facial palsy before and after the application of botulinum toxin. *Int J Dermatol.* 2019; 58(10):1175-1183. 2) Cooper L, Lui M, Nduka C. Botulinum toxin treatment for facial palsy: A systematic review. *J Plast Reconstr Aesthet Surg.* 2017; 70(6):833-841. 3) Lapidus JB, Lu JC, Santosa KB, Yaeger LH, Stoll C, Colditz GA, Snyder-Warwick A. Too much or too little? A systematic review of postparetic synkinesis treatment. *J Plast Reconstr Aesthet Surg.* 2020; 73(3):443-452. 4) NICE Guideline Template page 72, Section 5.7. <https://www.nice.org.uk/guidance/ng127/evidence/full-guideline-pdf-6775582573> (2019, accessed 17 July 2021). 5) Synkinesis. *Physiotherapy*. <https://www.physiotherapy.com/index.php?title=Synkinesis&oldid=274493>. (2021, accessed 1st July 2021) 6) Wollina U, Goldman A. Botulinum toxin A and/or soft tissue fillers for facial rehabilitation. *Wien Med Wochenschr.* 2017;167(3-4):92-95. 7) Bjørke HB, Bjørk TH, Berg T. Rekonstruksjon ved facialisparese [Facial paralysis reconstruction]. *Tidsskr Nor Lægeforen.* 2018;138(18). 8) Heydenrych I. The Treatment of Facial Asymmetry with Botulinum Toxin: Current Concepts, Guidelines, and Future Trends. *Indian J Plast Surg.* 2020; 53(2):219-229. 9) Neville C, Venables V, Aslet M, Nduka C, Kannan R. An objective assessment of botulinum toxin type A injection in the treatment of post-facial palsy synkinesis and hyperkinesis using the synkinesis assessment questionnaire. *J Plast Reconstr Aesthet Surg.* 2017; 70(11):1624-1628. 10) Markey JD, Loyo M. Latest advances in the management of facial synkinesis. *Curr Opin Otolaryngol Head Neck Surg.* 2017; 25(4):265-272. 11) Kanerva M. Buccinator synkinesis treated by botulinum toxin in facial palsy and hemifacial spasms. *J Plast Reconstr Aesthet Surg.* Epub ahead of print. Dec 5 2020. DOI:10.1016/j.bjps.2020.12.002. 12) Park MY, Ahn KY. Scientific review of the aesthetic uses of botulinum toxin type A. *Arch Craniofac Surg.* 2021 Feb;22(1):1-10. 13) Patel PN, Owen SR, Norton CP, Emerson BT, Bronaugh AB, Ries WR, Stephan SJ. Outcomes of Buccinator Treatment With Botulinum Toxin in Facial Synkinesis. *JAMA Facial Plast Surg.* 2018; 20(3):196-201. 14) Hayler R, Clark J, Croxson G, Coulson S, Hussain G, Ngo Q, Ch'ng S, Low TH. Sydney Facial Nerve Clinic: experience of a multidisciplinary team. *ANZ J Surg.* 2020; 90(5):856-860. 15) Fuzi J, Taylor A, Sideris A, Meller C. Does Botulinum Toxin Therapy Improve Quality of Life in Patients with Facial Palsy? *Aesthetic Plast Surg.* 2020; 44(5):1811-1819. 16) van Landingham SW, Diels J, Lucarelli MJ. Physical therapy for facial nerve palsy: applications for the physician. *Curr Opin Ophthalmol.* 2018; 29(5):469-475. 17) Choe WJ, Kim HD, Han BH, Kim J. Thread lifting: a minimally invasive surgical technique for long-standing facial paralysis. *HNO.* 2017; 65(11):910-915. 18) Herrero-Infante Y, Rodríguez-Sanz A, Máñez-Miró J, Vivancos-Matellano F. Hemifacial spasm through the last three decades: From etiology to efficacy and safety of long-term botulinum toxin treatment. *Clin Neurol Neurosurg.* 2021; 203:106555. 19) Serrera-Figallo MA, Ruiz-de-León-Hernández G, Torres-Lagares D, Castro-Araya A, Torres-Ferreros O, Hernández-Pacheco E, Gutierrez-Perez JL. Use of Botulinum Toxin in Orofacial Clinical Practice. *Toxins (Basel).* 2020 Feb; 12(2):112. 20) Alimohammadi M, Punga AR. Neurophysiological Measures of Efficacy and Safety for Botulinum Toxin Injection in Facial and Bulbar Muscles: Special Considerations. *Toxins (Basel).* 2017; 9(11):352. 21) Başar E, Arıcı C. Use of Botulinum Neurotoxin in Ophthalmology. *Turk J Ophthalmol.* 2016; 46(6):282-290. 22) Mandrini S, Comelli M, Dall'angelo A, Togni R, Cecini M, Pavese C, Dalla Toffola E. Long-term facial improvement after repeated BoNT-A injections and mirror biofeedback exercises for chronic facial synkinesis: a case-series study. *Eur J Phys Rehabil Med.* 2016; 52(6):810-818. 23) Alipour S, Pick C, Jansen S, Rink S, Klüßmann JP, Grosheva M. Long-term therapy with botulinum toxin in facial synkinesis: Retrospective data analysis of data from 1998 to 2018. *Clin Otolaryngol.* 2021; 46(4):758-766. 24) Bennis Y, Duquennoy-Martinet V, Guerreschi P. Epidemiologic Overview of Synkinesis in 353 Patients with Longstanding Facial Paralysis under Treatment with Botulinum Toxin for 11 Years. *Plast Reconstr Surg.* 2016; 138(2):376e-378e. 25) Çam OH, Özlüer B. Contralateral Depressor Labii Inferioris Chemodeneration for Congenital Unilateral Lower Lip Palsy. *J Craniofac Surg.* 2020; 31(6):e544-e546. 26) Shinn JR, Nwabueze NN, Patel P, Norton C, Ries WR, Stephan SJ. Contemporary Review and Case Report of Botulinum Resistance in Facial Synkinesis. *Laryngoscope.* 2019;129(10):2269-2273. 27) Grassi Salles A. Reply: Epidemiologic Overview of Synkinesis in 353 Patients with Longstanding Facial Paralysis under Treatment with Botulinum Toxin for 11 Years. *Plast Reconstr Surg.* 2016;138(2):378e-380e. 28) Krane NA, Markey JD, Loyo M. Neuromodulator for the Treatment of Congenital Unilateral Lower Lip Palsy. *Ann Otol Rhinol Laryngol.* 2019;128(1):62-65. 29) Verma R, Klein G, Xu Y, Rafailovich M, Gilbert Fernandez JJ, Khan SU, Bui DT, Dagum AB. Digital Image Speckle Correlation to Optimize Botulinum Toxin Type A Injection: A Prospective, Randomized, Crossover Trial. *Plast Reconstr Surg.* 2019;143(6):1614-1618. 30) Luijckx RE, Pouwels S, Beurskens CH, Kleiss JJ, Siemann I, Ingels KJ. Quality of life before and after different treatment modalities in peripheral facial palsy: A systematic review. *Laryngoscope.* 2017;127(5):1044-1051. 31) Miller MQ, Hadlock TA. Beyond Botox: Contemporary Management of Nonflaccid Facial Palsy. *Facial Plast Surg Aesthet Med.* 2020; 22(2):65-70. 32) Kilshaw AD, Holmes WJ, Matteucci P. Funding in facial palsy. *J Plast Reconstr Aesthet Surg.* 2016; 69(11):1526-1527. 33) Shinn JR, Nwabueze NN, Du L, Patel PN, Motamedi KK, Norton C, Ries WR, Stephan SJ. Treatment Patterns and Outcomes in Botulinum Therapy for Patients With Facial Synkinesis. *JAMA Facial Plast Surg.* 2019; 21(3):244-251. 34) Noland ME, Lalonde DH, Yee GJ, Rohrich RJ. Current Uses of Botulinum Neurotoxins in Plastic Surgery. *Plast Reconstr Surg.* 2016;138(3):519e-530e.

Submitter
Chang Kuang-cheng
vertebrahead@yahoo.com.tw - Taiwan

Presenter
Chang Kuang Cheng
vertebrahead@yahoo.com.tw - Taiwan

#8294

How to use buccal fat pad to improved midcheek groove in rhytedectomy

56 - Minimally invasive surgery / Minimally invasive advances

Chang K

Background/Objectives: Aging process of buccal fat pad was a critical factor of aging face. We reviewed more than 60 patients' MRI and followed for more than 5 years. From the data, we confirmed the aging process of buccal fat pad. To restore the youthful facial contour, not only skin should be tightened, but also the buccal fat pad should be repositioned. In the speech, the author will show a novel technique to reposit the buccal fat in rhytedectomy. By this way, not only the jowl can be improved but the middle cheek groove can be corrected also. How to use buccal fat pad to improved midcheek groove in rhytedectomy

Submitter
Chang Kuang-cheng
vertebrahead@yahoo.com.tw - Taiwan

Presenter
Chang Kuang Cheng
vertebrahead@yahoo.com.tw - Taiwan

#8295

A Novel approach for malar fat lifting by Knit circuit(KC) Suture

46 - Threads

Chang K

Background/Objectives: Malar fat dropping was a major aging problem during rejuvenation. Threading to reposit malar fat pad had become popular in recent year. However, some problem perplexed doctor when performed the threading. Iatrogenic mid cheek groove, iatrogenic nasojugal groove happened or thread protrude when doing superficial threading. The lifting effect can't last for more than half an year was also criticized. The speaker will show a novel technique in malar fat pad reposition. The knit circuit(K C) suture high performing the threading under SMAS prevent dimple or iatrogenic groove and prolong the result of lifting. And the procedure was safe and effective.

Submitter
Chang Kuang-cheng
vertebrahead@yahoo.com.tw - Taiwan

Presenter
Chang Kuang Cheng
vertebrahead@yahoo.com.tw - Taiwan

#8296

How to do extended deep plane face-lifting safely: Tunnel piercing technique

46 - Threads

Chang K

Background/Objectives: Concepts of facelift for facial rejuvenation was first introduced and widely accepted in the early twentieth century. The dissection and lifting technique of the superficial muscular aponeurotic system (SMAS) layer was first described by Skoog in 1973. Although SMAS plication or imbrication techniques has been operated for facelift, the release of these tissue attachments is restricted, adding to the difficulties to redrape the jawline and medial tissues. In 1992, Hamra introduced the deep plane and composite rhytidectomy techniques, this composite musculocutaneous flap for repositioning the elements of deep plane was also able to maintaining the relationship with the skin. Surgeons came to the realization that the aging process was more than just superficial cervicofacial laxity, the sufficient dissection of the deep plane was also critical. In 2006, Litner and Adamson compared SMAS techniques versus deep-plane rhytidectomy in the same patient, supporting the use of the deep-plane rhytidectomy's superiority. Jacono described their minimal access deep plane extended (MADE) vertical vector facelift in 2011, this caudocranial vertical lift not only improving the definition of jawline through volumizing extended deep plane rhytidectomy but also rejuvenating the midface by repositioning the malar fat pad. Several authors have advocate that the deep plane approach in facelifts have yielding a significant and durable results; However, the fear of facial nerve injuries and the complexity of surgical techniques accessing the deep plane have becoming a major stumbling block for surgeons. Hence, the novel technique that utilizing the soft-tissue spaces to create extended deep plane during facelift have emerged. In our investigation, by tunneling all the facial soft-tissue spaces establishing a safe and convenient means to fully dissect the extended deep-plane. The facial soft-tissue spaces have been proven to be effective and safe for its avascular and free of important facial nerve branches. In our surgical maneuver, five facial spaces have been used for tunneling to the deep plane, including the prezygomatic, lower premasseter, middle premasseter and premaxillary spaces that were discovered and defined by Mendelson and are widely used for its safe anatomical structures with reliable access. The fifth facial space of the lower cheek is infraauricular space, which will be introduced. Traditionally, the SMAS flap was elevated by "Line Infantry" method. In this speech, I will introduce my method "Tunnel piercing technique". By using this skill, we can make extended deep plane rhytidectomy easily and safely.

Submitter
Bafaqeeh Prof. Sameer
prof.bafaqeeh@gmail.com - Saudi Arabia

Presenter
Bafaqeeh Prof. Sameer
Riyadh, kingdom of Saudi Arabia -

#8297

Avoiding and managing rhinoplasty complications

48 - Complications - avoidance and management

Bafaqeeh P

Background/Objectives: Over-resection of the cephalic lateral crus, caudal septum, or anterior nasal spine is typically the cause of nasal tip deformity. Most of the functional and aesthetic problems encountered in revision cases are caused by the loss of mechanical support for the tip. This is primarily because the loss of tip support renders the tip weak and unstable, allowing it to be easily displaced backwards. Due to the weight of the relatively thick lobular skin and the constant downward pull of gravity, tip projection and rotation are lost, resulting in a depressed, drooping nasal tip with Polly beak deformity and an acute nasolabial angle. Additionally, the weak, unsupported tip cartilage can be easily displaced by the contracture forces of healing, resulting in irregular tip contour, alar notching or collapse, retracted columella, and a shortened nose with an overrotated tip. The most prominent feature of the face is the nasal tip. It has both aesthetic and practical importance. Therefore, the surgeon's primary objective should be to achieve a perfect tip. To correct tip deformities, we used an extended or replacement caudal septal cartilage graft, a single or multiple tip grafts, and a plumbing premaxillary augmentation cartilaginous graft surrounded by late fascia. Understanding the patient's expectations and ensuring that they are reasonable are crucial to achieving a favorable outcome in revision rhinoplasty. Typically, experienced surgeons take a variety of approaches to a given problem. Some will advocate an open approach, others will advocate an endonasal approach, some will always use grafts, and others will try to avoid grafting whenever possible. In rhinoplasty surgery, I believe that "every action has a reaction," and it is essential to comprehend the aesthetic and functional effects of the techniques employed. Key terms: Rhinoplasty, revision surgical technique, tip deformity, caudal septum.

Submitter
Bafaqeeh Prof. Sameer
prof.bafaqeeh@gmail.com - Saudi Arabia

Presenter
Bafaqeeh Prof. Sameer Ali
prof.bafaqeeh@gmail.com -

#8298

avoiding and managing rhinoplasty complications.

48 - Complications - avoidance and management

Bafaqeeh P

Background/Objectives: i cant make copy and pass for my abstracts.

Submitter
Pham Giang Thi Thanh
pttgiang@gmail.com - Vietnam

Presenter
Hochiminh City Hospital Of Dermato Venereology
Vietnam Pham
pttgiang@gmail.com - Vietnam

#8301

Aging Lip Filler: "how to enhance, not erase"

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Hochiminh City Hospital Of Dermato Venereology Vietnam P

Background/Objectives: The lips are considered as a key element of facial attractiveness due to their central position and their elemental role in verbal and non-verbal communication. Young age and advanced age patients commonly demand lip augmentation, but their specific purposes could be variety. Overfilled lips could lead to unnatural looking especially in advanced age patients. To approach Aging Lip filler, you should comprehend 3 issues: anatomy, rheology, and technique. First, aging lips have more elongated, less defined vermillion borders. The loss of volume and muscular tone produces rhytids of dry cutaneous lips. Even though the loss of volume is easy to treat by filler but overfilled this area could lead to “duck lips”. Second, lip fillers are different in their viscosity and elasticity, so choosing the suitable filler is significant. Lastly, every patient has their unique lip structure and ideal definition. The injector should have expertise and knowledge to comprehend the patient’s desire. Patient natural smiling depends on the quality, correct filler, and suitable injection plan. Aging lip fillers should enhance the natural beauty, not erase all the aging signs. Lip enhancement requires knowledge of anatomy, filler rheology and expertise techniques.

Submitter
De Sá Juliana Chieppe
juchieppe@gmail.com - Brazil

Presenter
De Sá Juliana Chieppe
juchieppe@gmail.com - Brazil

#8302

Treatment of "Sadness Look" in women of african ancestry

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

De Sá J¹

¹Clínica Sá e Chieppe Dermatologia, Salvador, Brazil

Background/Objectives: People of African ancestry frequently acquire a look of sadness as they age. This is a common feature in such individuals when compared to people of lighter complexion. The position of the lateral canthus is an important element of the rejuvenation process. Several features make the eyes of those of African ancestry ethnically unique. Their lateral canthal angle has a tendency to be less acute relative to their younger counterparts. The objective of this presentation is to guide injectors to identify the most common features in African-ancestry patients related to anatomic differences.

Methods: This case highlights a 39-year-old, dark-complexion, female patient with a descent of the lateral canthus of the eyes as referred to in the cited articles. A hybrid filler (consisting of hyaluronic acid combined with calcium hydroxyapatite) was injected subcutaneously in the infra-zygoma and mandible line using a 22G blunt-tip cannula. Part of this treatment involved the use of the MD Codes technique. The zygomatic arch was injected at the bone level to give support to the lateral canthus of the eye. The support and refinement of the periorbital area was reinforced by injecting the sub-orbicularis oculi fat pad – SOOF and the tear trough area. Photos (pre-, immediately post-, and 45 days post-procedure) were taken. [There is a video, in excellent resolution, with the complete injection performed on the patient.]

Results: In the right oblique position (pre-procedure, immediately post-procedure, and 45 days post-procedure), the improvement in the tear trough, the softening of the malar eyelid transition, and the reduction of the protrusion of the lower lip, are all clearly evident. In the tilting down position, the improvement of the dark circles under the eyes can be observed. There was repositioning of the lateral corner of the eye, a reduction of the protrusion of the lower lip, and an improvement in the contour of the face.

Conclusions: This clinical case provides evidence that women of African ancestry have a greater relative descent of the lateral canthal complex; and, probably this phenomenon is more predominant in African-American women than Caucasian women. This clinical case is compelling as it demonstrates the need to treat and prevent the descent of the lateral canthus in women of African ancestry, before it becomes more pronounced with the reabsorption of the bone of the orbital in the aging process. This is a feature that, if ignored, predisposes these individuals to a premature appearance of sadness.

References: 1. Odunze, M., Rosenberg, D. S., & Few, J. W. (2008). Periorbital Aging and Ethnic Considerations: A Focus on the Lateral Canthal Complex. *Plastic and Reconstructive Surgery*, 121(3), 1002–1008. doi:10.1097/01.prs.0000299381.40232.79/ 10.1097/01.prs.0000299381.40232.79 2. Swift A, Liew S, Weinkle S, Garcia JK, Silberberg MB. The Facial Aging Process From the "Inside Out". *Aesthet Surg J*. 2021 Sep 14;41(10):1107-1119. doi: 10.1093/asj/sjaa339. 3. de Maio M. MD Codes™: A Methodological Approach to Facial Aesthetic Treatment with Injectable Hyaluronic Acid Fillers. *Aesthetic Plast Surg*. 2021 Apr;45(2):690-709. doi: 10.1007/s00266-020-01762-7. Epub 2020 May 22. Erratum in: *Aesthetic Plast Surg*. 2021 Feb 17;; PMID: 32445044; PMCID: PMC8012343.

Submitter
De Sá Juliana Chieppe
juchieppe@gmail.com - Brazil

Presenter
Chieppe Juliana
juchieppe@gmail.com - Brazil

#8303

Similarities and Differences of Facial Rejuvenation Treatments in Three Different Ethnicities

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Chieppe J¹

¹Clínica Sá e Chieppe Dermatologia, Salvador, Brazil

Background/Objectives: A diversity of patients with different facial features is crucial to a better understanding of the effects of aesthetic procedures on various types of faces and to avoid unsatisfactory results. Three patients, of various ethnicities and, consequently, facial features, were treated using their distinct facial characteristics as a parameter for treatment planning. Differences and similarities among treatment plans attest to the versatility of aesthetic procedures. A thorough understanding of these differences and similarities will assist the injector in decision-making when handling a diverse patient group with distinct facial features. This study was designed to demonstrate how injectable fillers render outstanding results with patients of different ethnicities.

Methods: Three female patients (a 41-year-old Caucasian, a 50-year-old African-American, and a 60-year-old Asian) were treated with a hybrid filler - consisting of 20 mg/mL of hyaluronic acid (HA) combined with calcium hydroxyapatite (HA/CaHA) - associated with other HA fillers, using the MD Codes technique. Asians and African-descendants have different facial features when compared to Caucasians. Before the treatment, the Asian patient showed less anterior projection of the chin. In general, African descendants present more microgenia when compared with Caucasians, who have more chin projection. Caucasians have a narrower interorbital distance when compared to Africans. The treatment plans were designed with similarities and differences in accordance with patients' individual needs. Both the Asian and African-American patients were treated in the chin apex, the pre-jowl area, and the mandible line. The patient of African descent was treated in the labiomental angle to improve the protruded lower-lip. This patient presented maxillary hypoplasia and an early descent of the lateral canthus due to orbital remodeling. To project the maxilla, HA was injected in the suprapariosteal area. In addition, the SOOF area was treated to support the periorbital region.

Results: Targeted treatment provided improvements in all three patients' midface, chin and perioral areas. The patient of African-descent had an improvement in the nasolabial fold, maxillary projection and chin height. The Asian patient demonstrated an impressive improvement in the jowl and marionette lines - due to an immediate lift-effect of the hybrid filler. A comparative analysis in the tilting down position showed a significant improvement in the contour of the face, nasolabial fold and marionette lines in all three patients of different ethnicities.

Conclusions: The treatment plan of the patients in this study was created during their initial consultation and addressed each patient's individual anatomical needs. When comparing these anatomical findings with published research, they were similar. The treatment of different ethnic groups contributes to a greater understanding of their distinct treatment needs as well as an improvement of general aesthetic care in a diverse world. Extensive knowledge of the facial features of different ethnicities and their unique needs and desires enables doctors and other injectors to make well-informed assessments and treatment decisions.

References: 1. Heydenrych I, De Boule K, Kapoor KM, Bertossi D. The 10-Point Plan 2021: Updated Concepts for Improved Procedural Safety During Facial Filler Treatments. *Clin Cosmet Investig Dermatol*. 2021 Jul 6;14:779-814. doi: 10.2147/CCID.S315711. Erratum in: *Clin Cosmet Investig Dermatol*. 2021 Nov 02;14:1601-1602. PMID: 34276222; PMCID: PMC8279269. 2. Swift A, Liew S, Weinkle S, Garcia JK, Silberberg MB. The Facial Aging Process From the "Inside Out". *Aesthet Surg J*. 2021 Sep 14;41(10):1107-1119. doi: 10.1093/asj/sjaa339. 3. de Maio M. MD Codes: A methodological Approach to Facial Aesthetic Treatment with injectable Hyaluronic Acid Fillers. *Aesthetic Plast Surg*. 2021 Apr;45(2):690-709. doi: 10.1007/s00266-020-01762-7. Epub 2020 May 22. Erratum in: *Aesthetic Plast Surg*. 2021 Feb 17;: PMID: 32445044; PMCID: PMC8012343.

Submitter
Robredo-vitas Irene Gaile C.
irenegaile@gmail.com - Philippines

Presenter
Robredo-vitas Irene Gaile
irenegaile@gmail.com - Philippines

#8304

Lifestyle Dermatology as a Proactive Approach to Aesthetic Enhancement and Aging Prevention

62 - Anti-aging & integrative medicine

Robredo-vitas I¹

¹Philippine Dermatological Society, Manila, Philippines

Background/Objectives: The evolving landscape of dermatology and aesthetic medicine has transcended traditional boundaries, expanding from the treatment of skin conditions to include a pro-active, lifestyle-oriented approach aimed at enhancing aesthetic qualities and preempting the signs of aging. This paradigm shift is driven by a growing segment of patients who seek dermatological consultations not as a response to skin ailments, but as an integral part of their lifestyle regimen to maintain and elevate their already healthy skin. This presentation delves into the emergence of Lifestyle Dermatology/Medicine, a trend that underscores the increasing desire among individuals to invest in preventive skincare practices that ensure long-term skin health and radiance.

Submitter
Robredo-vitas Irene Gaile C.
irenegaile@gmail.com - Philippines

Presenter
Robredo-vitas Irene Gaile
irenegaile@gmail.com - Philippines

#8305

Trust Transitions in Aesthetic Dermatology: From Influencers to Experts

73 - Marketing & Practice management

Robredo-vitas I¹

¹Philippine Dermatological Society, Manila, Philippines

Background/Objectives: In recent years, the dynamics of consumer trust in aesthetic dermatology have shifted significantly. While social media influencers once dominated the landscape, there is a growing demand from consumers for credible and scientifically-backed information. This lecture explores the evolving role of dermatologists and aesthetic practitioners as primary influencers in the realm of social media, driven by a consumer base that is becoming increasingly discerning about the sources of their information, especially regarding aesthetic treatments and products.

Submitter
Robredo-vitas Irene Gaile C.
irenegaile@gmail.com - Philippines

Presenter
Robredo-vitas Irene Gaile
irenegaile@gmail.com - Philippines

#8306

Rethinking Rejuvenation: Comparing Surgical and Non-Surgical Procedures in Aesthetic Dermatology

77 - Unclassified topics

Robredo-vitas I¹

¹Philippine Dermatological Society, Manila, Philippines

Background/Objectives: The aesthetic dermatology field is experiencing a significant transformation, driven by advancements in technology and a shifting patient preference towards non-invasive treatments. This presentation aims to compare and contrast surgical procedures with their non-surgical counterparts, highlighting effectiveness, safety profiles, patient satisfaction, and long-term outcomes.

Submitter
Robredo-vitas Irene Gaile C.
irenegaile@gmail.com - Philippines

Presenter
Robredo-vitas Irene Gaile
irenegaile@gmail.com - Philippines

#8307

Advancing Aesthetics: The Impact of Non-Invasive Procedures in Dermatology

45 - Combination treatments

Robredo-vitas I¹

¹Philippine Dermatological Society, Manila, Philippines

Background/Objectives: As aesthetic dermatology continues to evolve, non-invasive procedures are playing a pivotal role in shaping the future of skin care and rejuvenation. This presentation examines the latest trends in non-invasive skin tightening and rejuvenation techniques and products, evaluating their effectiveness across diverse skin types and demographics. Special attention is given to novel advancements such as exosomes, PDRN, PL, Hybrid-cooperative complexes, and other bioremodeling agents, which are emerging as a groundbreaking tool in the enhancement of skin appearance and health.

Submitter
Robredo-vitas Irene Gaile C.
irenegaile@gmail.com - Philippines

Presenter
Robredo-vitas Irene Gaile
irenegaile@gmail.com - Philippines

#8308

Age Gracefully: A Holistic Approach to Preventing and Slowing Skin Aging

62 - Anti-aging & integrative medicine

Robredo-vitas I¹

¹Asian Hospital and Medical Center, Muntinlupa, Philippines

Background/Objectives: As the global population ages, the pursuit of strategies to slow and prevent the signs of aging remains at the forefront of dermatological science. This presentation explores a holistic approach to skin aging that encompasses not only topical treatments and procedures but also emphasizes the role of lifestyle, diet, mental health, and overall wellness in maintaining youthful skin.

Submitter
Germani Marcelo
margermani@hotmail.com - Brazil

Presenter
Germani Marcelo
margermani@hotmail.com - Brazil

#8309

To respect or not to respect the labial compartments during lip filling?

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Germani M¹

¹1. Department of periodontology and implantology, University of Guarulhos, São Paulo, Brazil, Lins, Brazil

Background/Objectives: The objective of the research was to conduct a clinical study that evaluated and compared two lip augmentation techniques using the same product based on hyaluronic acid (HA). The primary variable used for the analysis of quantitative results was 3D stereophotogrammetry and standardized photographs. Primary Objective To assess the aesthetic outcome of the procedure both subjectively and objectively; A- Subjectively; to observe any functional changes or lack thereof in activities like kissing, whistling, and drinking through a straw. B- Objectively; to evaluate the volumetric increase using 3D stereophotogrammetry.

Methods: Lips are essential for function, aesthetics, and emotion, with aging reducing their attractiveness. Current lip enhancement techniques lack direct comparisons using the same product and both quantitative and qualitative assessments. Recent research identified twenty-four lip fat compartments, hinting that preserving these during enhancement could offer more natural results. Our study investigates various lip filling methods, aiming to assess the naturalness of results through validated questionnaires and stereophotogrammetry, focusing on the treatment of lip fat compartments. The study received ethical approval from the Research Ethics Committee of the Centro Universitário Salesiano, under registration number CAAE 74170823.8.0000.5379. We divided the participants into two groups of 20 each for this research. Both groups underwent injection procedures using a hyaluronic acid (HA)-based product, all performed by the same highly experienced practitioner. One group was treated with needle injections, applied perpendicularly and designed to preserve the lip fat compartments. The other group received treatments with cannulas, using horizontal injections that did not aim to preserve these compartments.

Results: The comparisons between the groups revealed significant differences in lip volume across all three evaluated periods (immediately, 30 days, and 90 days). The average increase in lip volume for the needle group was 0.86 cc immediately after treatment, 0.43 cc at 30 days, and 0.33 cc at 90 days. In contrast, for the group treated with cannula injections, the increases were 0.66 cc immediately, 0.18 cc at 30 days, and 0.16 cc at 90 days, respectively. The differences were statistically significant across all evaluated periods ($P < 0.05$). Based on the results, the study concludes that the needle injection technique provides a more significant and lasting increase in lip volume compared to the cannula injection technique. This difference was statistically significant at all evaluated time points (immediately, 30 days, and 90 days), indicating a superior efficacy of the needle technique for lip augmentation.

Conclusions: In conclusion, our study has demonstrated that lip augmentation with needle injections using hyaluronic acid is more effective for increasing lip volume than the cannula technique. This efficacy is not only evident in the more significant volumetric enhancement observed immediately and sustained over 90 days but also in the preservation of lip functionality and patient satisfaction. Our findings suggest that the needle technique, with its precise targeting of lip fat compartments, aligns with the contemporary aesthetic demand for natural-looking and functional results. As such, it presents a compelling option for patients seeking lip enhancements that maintain the lips' dynamic expressions and movements.

References: 1. Czumbel, L. M. et al. Hyaluronic Acid Is an Effective Dermal Filler for Lip Augmentation: A Meta-Analysis. *Front. Surg.* 8, 681028 (2021). 2. Hernandez, C. A. et al. Facial Soft Tissue Repositioning With Neuromodulators: Lessons Learned From Facial Biomechanics. *Aesthet. Surg. J.* 42, 1163–1171 (2022). 3. Bertucci, V., Nikolis, A., Solish, N., Lane, V. & Hicks, J. Subject and partner satisfaction with lip and perioral enhancement using flexible hyaluronic acid fillers. *J. Cosmet. Dermatol.* 20, 1499–1504 (2021). 4. Germani M, Rabelo V, da Silva AM, Alves LT, & Rogerio V. Mid- Facial Restructuring with Hyaluronic Acid: A Case Report. 2, (2020). 5. Solish, N. et al. Dynamics of hyaluronic acid fillers formulated to maintain natural facial expression. *J. Cosmet. Dermatol.* 18, 738–746 (2019). 6. Gavard Molliard, S., Albert, S. & Mondon, K. Key importance of compression properties in the biophysical characteristics of hyaluronic acid soft-tissue fillers. *J. Mech. Behav. Biomed. Mater.* 61, 290–298 (2016). 7. Percec, I. et al. An Objective, Quantitative, Dynamic Assessment of Hyaluronic Acid Fillers That Adapt to Facial Movement. *Plast. Reconstr. Surg.* 145, 295e–305e (2020). 8. Mckee, D. et al. Effective Rejuvenation with Hyaluronic Acid Fillers: Current Advanced Concepts. *Plast. Reconstr. Surg.* 143, 1277e–1289e (2019). 9. Hilton, S., Frank, K., Alfertshofer, M. & Cotofana, S. Clinical outcomes after lip injection procedures—Comparison of two hyaluronic acid gel fillers with different product properties. *J. Cosmet. Dermatol.* 22, 119–127 (2023). 10. Vieira, M. G. et al. Clinical Management of Nasal Skin Necrosis Caused by Hyaluronic Acid Filler. *J. Craniofac. Surg.* 32, e120–e122 (2021). 11. Rogerio, V. et al. Features to consider for mimicking tissues in orofacial aesthetics with optimal balance technology and non-animal stabilized hyaluronic acid (Restylane®): The MIMT concept. *J. Stomatol. Oral Maxillofac. Surg.* 123, 440–447 (2022). 12. Klassen, A. F., Cano, S. J., Schwitzer, J. A., Scott, A. M. & Pusic, A. L. FACE-Q Scales for Health-Related Quality of Life, Early Life Impact, Satisfaction with Outcomes, and Decision to Have Treatment: Development and Validation. *Plast. Reconstr. Surg.* 135, 375–386 (2015). 13. Matarasso, S. L., Carruthers, J. D. & Jewell, M. L. Consensus Recommendations for Soft-Tissue Augmentation with Nonanimal Stabilized Hyaluronic Acid (Restylane): *Plast. Reconstr. Surg.* 117, 3S–34S (2006). 14. Fagien, S., Bertucci, V., von Grote, E. & Mashburn, J. H. Rheologic and Physicochemical Properties Used to Differentiate Injectable Hyaluronic Acid Filler Products: *Plast. Reconstr. Surg.* 143, 707e–720e (2019). 15. de la Guardia, C., Virno, A., Musumeci, M., Bernardin, A. & Silberberg, M. B. Rheologic and Physicochemical Characteristics of Hyaluronic Acid Fillers: Overview and Relationship to Product Performance. *Facial Plast. Surg.* 38, 116–123 (2022). 16. Choi, M.-S. et al. Comparative Analyses of Inflammatory Response and Tissue Integration of 14 Hyaluronic Acid-Based Fillers in Mini Pigs. *Clin. Cosmet. Investig. Dermatol.* Volume 14, 765–778 (2021). 17. Goodman, G. J., Swift, A. & Remington, B. K. Current Concepts in the Use of Voluma, Volift, and Volbella: *Plast. Reconstr. Surg.* 136, 139S–148S (2015). 18. Trinh, L. N., Grond, S. E. & Gupta, A. Dermal Fillers for Tear Trough Rejuvenation: A Systematic Review. *Facial Plast. Surg.* 38, 228–239 (2022).

Submitter
Germani Marcelo
margermani@hotmail.com - Brazil

Presenter
Germani Marcelo
margermani@hotmail.com - Brazil

#8310

Targeting depressor anguli oris with botulinum toxin for improving the oral commissures and labiomental fold: a clinical interventional study

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Germani M¹

¹1. Department of periodontology and implantology, University of Guarulhos, São Paulo, Brazil, Lins, Brazil

Background/Objectives: Retrospective and anatomical studies 1–3,8,9 have suggested different strategies for treating DAO with BoNT-A. All these strategies usually focus on a special care to avoid targeting depressor labii inferioris and other modiolus muscles, which may end in a possible dysfunction of the perioral region and affect facial expression. However, there is a lack of interventional studies assessing the clinical outcomes of treating DAO with BoNT-A. For this reason, the aim of the present study was to evaluate the effect of reducing the caudal pull of the DAO on the position of the oral commissures and labiomental sulcus deep.

Methods: This prospective clinical study, adhering to ethical guidelines with approval from the University of Guarulhos' Research Ethics Committee, investigated the effects of BoNT-A injections in 34 volunteers, excluding those with certain medical conditions and previous aesthetic treatments. Employing a triple-blind method, the study aimed for objectivity in treatment assessments. A single seasoned clinician performed DAO injections using a standardized technique. The effectiveness was evaluated using the OCSS and GAIS 30 days post-treatment, supplemented by the Face-Q Satisfaction questionnaire and pre/post-treatment photographs analyzed with design software.

Results: BoNT-A injections into DAO significantly improved the labiomental fold deep and commissure position as rated by patients ($p < 0.01$) and blinded investigator ($p = 0.005$) using the OCSS. Severe deep commissures with frown at rest passed from 14.7% to 8.8% for patients and from 17.6% to 11.8% for the blinded physician; moderate deep labiomental fold with downturned corners passed from 26.5% to 14.7% for patients and from 29.4% to 17.6% for the blinded physician, while mild labiomental fold with downturned commissures passed from 47.1% to 41.2% for patients and from 41.2% to 44.1% for the blinded physician. Finally, none labiomental fold with slight upturned commissures increased in percentage from 11.8% to 35.3% for patients and from 11.8% to 26.5% for the blinded physician. Subject and blinded physician GAIS showed positive results 30 days after BoNT-A treatment of DAO. Most of the subjects (55.9%) perceived no changes of the oral commissure or labiomental folds, and 38.2% perceived a mild improvement after treatment. The blinded investigator perceived that most of the patients (50%) had a mild improvement, while in 41.2% perceived no changes. Both, subjects and blinded investigator perceived 2 patients (5.9%) worsened the condition. A very worsened condition was perceived on 1 patient (2.9%) by the blinded investigator. The mean distance from the oral commissure to the mandibular margin at baseline was 15.99 mm (1.89), and at 30 days was 16.84 mm (2.02), showing a significant higher position of the oral commissure ($p < 0.001$).

Conclusions: In summary, this study successfully demonstrated that BoNT-A injections into the DAO significantly enhance the appearance of labiomental folds and oral commissures, validated through both patient and blinded investigator assessments. The statistical analysis revealed a marked improvement in facial aesthetics, which was further supported by positive patient satisfaction scores. However, individual responses varied, highlighting the importance of personalized treatment planning. Overall, these results affirm the effectiveness of BoNT-A in aesthetic facial treatments, offering valuable insights for clinical practice in aesthetic medicine.

References:References 1. Choi YJ, We YJ, Lee HJ, et al. Three-Dimensional Evaluation of the Depressor Anguli Oris and Depressor Labii Inferioris for Botulinum Toxin Injections. *Aesthet Surg J*. 2021;41(6):NP456-NP461. doi:10.1093/asj/sjaa083 2. Moradi A, Shirazi A. A Retrospective and Anatomical Study Describing the Injection of Botulinum Neurotoxins in the Depressor Anguli Oris. *Plast Reconstr Surg*. 2022;149(4):850-857. doi:10.1097/PRS.00000000000008967 3. Hur MS, Kim HJ, Lee KS. An Anatomical Study of the Medial Fibers of Depressor Anguli Oris Muscle Passing Deep to the Depressor Labii Inferioris Muscle: J Craniofac Surg. 2014;25(2):614-616. doi:10.1097/SCS.0000000000000452 4. Hernandez CA, Davidovic K, Avelar LET, et al. Facial Soft Tissue Repositioning With Neuromodulators: Lessons Learned From Facial Biomechanics. *Aesthet Surg J*. 2022;42(10):1163-1171. doi:10.1093/asj/sjac090 5. Germani Vieira M, Rogerio V, Roschel P, Rabelo V, Teixeira T, Muñoz-Lora VRM. Myomodulation using hyaluronic acid fillers as an efficient and innovative treatment for gummy smile: A case report. *J Oral Biol Craniofac Res*. 2022;12(3):376-380. doi:10.1016/j.jobcr.2022.04.009 6. Levy PM. The 'Nefertiti lift': A new technique for specific re-contouring of the jawline. *J Cosmet Laser Ther*. 2007;9(4):249-252. doi:10.1080/14764170701545657 7. Germani M, Almeida CCMS, Munoz-Lora VRM, et al. How to improve infraorbital hollows with neuromodulators—A clinical prospective interventional study about the application of facial biomechanics. *J Cosmet Dermatol*. Published online August 26, 2023:jocd.15970. doi:10.1111/jocd.15970 8. Choi YJ, Kim JS, Gil YC, et al. Anatomical Considerations Regarding the Location and Boundary of the Depressor Anguli Oris Muscle with Reference to Botulinum Toxin Injection: *Plast Reconstr Surg*. 2014;134(5):917-921. doi:10.1097/PRS.0000000000000589 9. Yi KH, Lee JH, Hu HW, et al. Novel anatomical proposal for botulinum neurotoxin injection targeting depressor anguli oris for treating drooping mouth corner. *Anat Cell Biol*. 2023;56(2):161-165. doi:10.5115/acb.22.258 10. Cohen JL, Thomas J, Paradkar D, et al. An Interrater and Intrarater Reliability Study of 3 Photographic Scales for the Classification of Perioral Aesthetic Features. *Dermatol Surg*. Published online 2014. 11. Klassen AF, Cano SJ, Schwitzer JA, Scott AM, Pusic AL. FACE-Q Scales for Health-Related Quality of Life, Early Life Impact, Satisfaction with Outcomes, and Decision to Have Treatment: Development and Validation. *Plast Reconstr Surg*. 2015;135(2):375-386. doi:10.1097/PRS.0000000000000895

Submitter
Yi Kyu-ho
kyuho90@daum.net - South Korea

Presenter
Yi Kyuho
kyuho90@daum.net -

#8313

What Are the Factors That Enable Thread Lifting to Last Longer?

46 - Threads

Yi K

Background/Objectives: Country of residence of author(s): Korea and Hong Kong Thread-lifting traditionally addressed aging-related skin laxity by leveraging precise thread placement and traction. However, recent advancements, notably cog threads, expanded its application to younger patients seeking facial contour refinement.

Methods: These newer threads effectively lift sagging areas and refine facial contours, broadening the procedure's appeal. Challenges arise in selecting threads due to variable physician preferences and patient needs. Clear indications for thread efficacy are vital for credibility and tailored selection. Thread choice depends on tissue laxity, necessitating lighter threads for minimal laxity and stronger ones for significant sagging. However, no single thread universally suits all cases.

Results: Combining different threads is favored for optimal outcomes and minimizing side effects. Excessive traction post-procedure may lead to prolonged discomfort and skin irregularities.

Conclusions: Post-procedural tension adjustments through massage remain debated, potentially conflicting with minimally invasive principles. Understanding thread characteristics guides tailored selection, considering patient conditions and procedural goals. This comprehensive understanding extends beyond specific products, aiming for optimal outcomes in thread-lifting procedures. Key factors influencing outcomes encompass thread materials, thickness, cog shapes, insertion depth, lifting vectors, and absorbable thread expiration dates.

Submitter
Yi Kyu-ho
kyuho90@daum.net - South Korea

Presenter
Yi Kyuho
kyuho90@daum.net -

#8314

Anatomy of the temporal region to guide filler injections

43 - Anatomy related to non-or minimally invasive approaches

Yi K

Background/Objectives: Hollow temples are not typically considered aesthetically pleasing, and hollowness worsens with the aging process.

Methods: When filling this region with fillers, there are several anatomical considerations, with injection techniques varying depending on the layer targeted. Specifically, injections between the superficial temporal fascia and the superficial layer of the deep temporal fascia are performed using a cannula, while periosteal layer injections involve the use of a needle to reach the bone before inserting fillers.

Results: Detailed anatomical insights encompass the boundaries of the temporal fossa and cautionary notes regarding blood vessels, supported by specific studies on veins and arteries in the temporal region.

Conclusions: Complications, including vessel injuries, are discussed alongside an exploration of various injection techniques. This review provides a comprehensive exploration of anatomical considerations and the specific methodologies employed in temple augmentation with fillers.

Submitter
Yi Kyu-ho
kyuho90@daum.net - South Korea

Presenter
Yi Kyuho
kyuho90@daum.net -

#8316

Why do marionette lines appear? Exploring the anatomical perspectives and role of thread-based interventions

43 - Anatomy related to non-or minimally invasive approaches

Yi K

Background/Objectives: The pathogenesis of marionette lines involves a complex interplay of anatomical, physiological, and age-related factors leading to the development of wrinkles around the oral commissures. This exploration delves into the distinct anatomical predispositions observed among different ethnicities, emphasizing the role of compact modiolus structures and muscle compositions. Notably, individuals of East Asian descent exhibit inherent facial structures that predispose them to pronounced sagging around the oral commissures during aging. The emergence of distinct facial lines, such as the commissural line and the melolabial fold, contributes to the formation of marionette lines. This specific wrinkle pattern, resembling a marionette puppet's mouth contours, is influenced by various factors like bone resorption, gravitational forces, fat compartment variations, muscle compression, ligament tethering, and skin aging. Treatment strategies for marionette lines encompass diverse interventions, including filler injections, botulinum neurotoxin, surgeries targeting fat reduction, thread lifting, and volumizing fillers. These approaches aim to address the underlying causes and mitigate the appearance of marionette lines. Botulinum neurotoxin injections, for instance, weaken specific facial muscles, reducing downward strain and aiding in tissue retraction. Anatomical considerations during procedures are crucial to avoid nerve or vascular damage. Delicate manipulation and precise entry points are essential to prevent inadvertent injuries, particularly concerning blood vessels like the facial artery and nerves like the mental nerve. Technical guidelines for procedures targeting marionette lines involve specific techniques like cogged thread reverse methods and volumizing thread placements. Attention to entry points, tissue engagement, and the direction of threads is crucial for effective treatment outcomes, minimizing complications, and ensuring patient safety.

Submitter
Ashley Emmaline
emmaline.ashley@doctors.org.uk - United Kingdom

Presenter
Ashley Emmaline
emmaline.ashley@doctors.org.uk - United Kingdom

#8318

Retrospective Analysis of 2,227 Restylane Filler Treatments in a UK Training Academy

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Ashley E¹, Chadha P¹, Watson L¹

¹Acquisition Aesthetics, London, United kingdom

Background/Objectives: Injectable hyaluronic acid (HA) fillers, particularly the Restylane (Galderma Laboratories, LP) range, are widely used in cosmetic treatments, yet comprehensive data on adverse events in training academy settings remain sparse. This retrospective study aims to evaluate the incidence and nature of adverse events associated with Restylane fillers across 2,227 treatments of 1,052 patients conducted at Acquisition Aesthetics, a leading UK training academy.

Methods: We conducted a detailed analysis of treatment records from August 2020- July 2023, examining the frequency and types of adverse events in relation to different Restylane products and treatment areas.

Results: Among the 2,227 treatments, a total of 6 adverse events were documented, yielding an adverse event rate of 0.269%. The most common adverse events included bruising and asymmetry, with the tear trough and lips being the most frequently affected areas. No serious adverse events were reported.

Conclusions: This study demonstrates a relatively low incidence of adverse events in hyaluronic acid filler treatments within a training academy setting. This supports the argument that Restylane products may be used safely in educational environments. Further studies are recommended to expand upon these findings and explore long-term outcomes.

Submitter
Ryan Michael
mike@dubaihairdoctor.com - United Arab Emirates

Presenter
Ryan Michael
mike@dubaihairdoctor.com -

#8319

Hypnotherapy as a Hair Loss Recovery option

52 - Hair restoration

Ryan M

Background/Objectives: The purpose of this abstract is to present a speaker who will discuss the topic of therapeutic hypnosis and its effectiveness in treating hair loss. The speaker will highlight the benefits of hypnotherapy, such as its ability to decrease stress and anxiety levels in clients without any side effects. They will explain how hypnosis can bring about both psychological and physiological changes, making it a potential method to promote hair growth. The speaker will address the connection between hypnosis and stress levels, emphasizing that reducing stress through hypnosis can potentially aid in hair regrowth. They will also mention the importance of combining hypnosis with other treatments for hair loss. The speaker will discuss the temporary nature of stress-related hair loss and how hypnosis can be used to treat it. They will emphasize the role of relaxation techniques in managing anxiety and reducing the risk of further hair loss. The speaker will explain how a relaxed state during hypnotherapy sessions allows negative beliefs about hair and hair loss to be replaced with positive ones. They will mention that while hypnotherapy has shown promising results in reversing hair loss, more evidence is needed for further confidence.

Submitter
Qureshi Kamran Izhar
kizhar@gmail.com - Pakistan

Presenter
Qureshi Kamran
kizhar@gmail.com - Pakistan

#8324

Acne Scars - A combination approach for an effective outcome

42 - Scars & acne

Qureshi K¹

¹ Antiage Lifestyle Clinic, Lahore, Pakistan

Background/Objectives: Acne is a predominant condition with severe permanent outcomes like scarring. Scars can lead to social anxiety and phobias leading to decreased social functioning. Currently acne scars are treated with scar subcision, chemical peels, energy-based treatments and microneedling. Results vary according to skin type, duration of the scars and the severity. We propose a multimodality approach consisting of scar subcision followed by injecting PRP, Radio frequency needling, CO2 Fractional laser and microneedling all done in one session. The objective of combining the treatment is to work at all levels of the skin to provide optimal results and to minimise the complications associated with each individual treatment modality. A retrospective review was done on 10 patients all treated with the multimodality approach in an outpatient cosmetic dermatology practice. Patients were between 18 to 35 years of age and an average of 3 treatments were done. The skin type of patients was Fitzpatrick Skin Types IV to VI. Before and after photos and patient feedback on side effects and satisfaction level were used to assess changes. To conclude the multimodality approach was well tolerated and apparently working at all levels helped in a better outcome for the patients. Larger randomized, controlled clinical trials are needed to support these observations.

Submitter
Waseem Saman
samanwasim@yahoo.com - Pakistan

Presenter
Waseem Saman
samanwasim@yahoo.com -

#8325

unlocking the radiant skin through treatment fusion

45 - Combination treatments

Waseem S

Background/Objectives: Hyperpigmentation is a big challenge to treat. Hyperpigmentation is a common pigmentary disorder characterized by increase production of melanin. It is seen in Asian skin more. The major reason of hyperpigmentation in Pakistan include melanocyte hyperactivity followed by exposure to ultra violet radiation, race, use of certain medication, pregnancy and use of cosmetics. There are variety of resurfacing treatment options but treatments become difficult and challenging due to compliance issues related to affordability and treatment duration. If the patient does not see improvement in 2-3 wks compliance decreases. It is very important to educate our patients about treatment strategies.

Submitter
Benalla Abdessamad
docsamadbenalla@gmail.com - Italy

Presenter
Benalla Abdessamad
docsamadbenalla@gmail.com -

#8328

The Effect of Oxytocin Gel on Vaginal Atrophy in Postmenopausal Women

47 - Genital restoration & Functional gynecology

Benalla A

Background/Objectives: When women enter menopause, they experience several changes to their bodies. Declines in the body's estrogen levels can lead to hot flashes, night sweats, vulvovaginal atrophy, and an increased risk of depression, osteoporosis, and sexual dysfunction. Estrogen is integral to the process of stimulating the growth of cells in the outer layer of tissue of the vagina and supporting healthy vaginal mucosa. Therefore, when the body has decreased estrogen levels during menopause, women may experience thinner, more fragile, and less flexible vaginal tissues as well as reduced, thinner vaginal mucosa. This may cause painful intercourse (dyspareunia) and burning, stinging, and/or itching of the genitals. Currently, vulvovaginal atrophy is often treated with local estrogen. While this method is effective with a small probability of adverse side effects, it is still useful to investigate other potential treatment options. In a recent randomized, double-blind, placebo-controlled trial, we examined the safety and effectiveness of using intravaginally applied oxytocin to treat vaginal atrophy.

Methods: Fifty postmenopausal women between the ages of 47 to 66 years participated in this study. All of the women were sexually active, in a monogamous relationship, and had clinically documented vulvovaginal atrophy. The participants underwent a clinical examination before beginning the intervention. Their vaginal pH, the color of their vaginal mucosa, and the cytology of their vaginal cells were documented. Then, the women were randomly divided in a 1:1 ratio into the oxytocin group and the control group. They were all given 14 syringes either containing 1 mL of a gel with 600 IU/mL of oxytocin (for those in the oxytocin group) or 1 mL of the gel alone (for those in the control group). None of the participants knew which gel they received. For two weeks, women from both groups inserted 1 mL of their respective gel intravaginally each night before bedtime. At the end of the two-week period, women were reexamined, and the color of the vaginal mucosa, pH, and the cytology of the vaginal cells were again documented.

Results: We found that the color of the vaginal mucosa shifted from pale white to red in all 25 individuals in the oxytocin group after treatment, which was likely due to increased circulation and vascularization of the mucosa. In contrast, just 4 of the 25 patients in the control group experienced this shift in the color of their vaginal mucosa. Additionally, we noted significant changes in the oxytocin group participants' vaginal pH and vaginal maturation index (VMI). Specifically, the women using the oxytocin gel saw a significant decrease in their intravaginal pH and a significant increase in their VMI, indicating an increased proliferation and maturation of cells. All of these results suggested positive effects of using oxytocin gel to treat vulvovaginal atrophy.

Conclusions: Although the relatively small-scale nature and short timeframe of this study may be considered limitations, the findings still indicate that oxytocin gel could be a safe and effective treatment for vaginal atrophy. We concluded, "Intravaginal treatment with an oxytocin gel containing 600 IU/mL of oxytocin, dispersed in a starch gel based on Hypromellose and adjusted to pH 3.8, effectively counteracts physical expressions of vaginal atrophy, suggesting that it can be used to rejuvenate the vaginal mucosa in menopausal women."

Submitter
Benalla Abdessamad
docsamadbenalla@gmail.com - Italy

Presenter
Benalla Abdessamad
docsamadbenalla@gmail.com -

#8329

Laser & EBD Treatments CO₂-Laser therapy for women with genitourinary syndrome of menopause

49 - Lasers, EBDs & Light

Benalla A

Background/Objectives: GSM can have a negative impact on a woman's sexual relationships and quality of life because the changes in the vaginal/vulvar tissues can make sex painful or uncomfortable, and the urinary issues can be disruptive and frustrating. Nevertheless, it remains underdiagnosed, and many women do not receive the treatment they need due to a lack of knowledge about the condition and the continuing belief that such symptoms are simply a part of aging. Fortunately, there are treatment options available to women with GSM that can help alleviate symptoms. In general, the first treatment option most providers prescribe for GSM is local estrogen therapy (a cream, ring, or tablet applied to or inserted into the vagina to deliver estrogen locally). However, for women who do not respond to hormones or cannot take them for some reason, laser therapy is another potential treatment option for GSM. Currently, there are two main types of lasers for this type of treatment: the Erbium YAG Laser and the CO₂-Laser. Several studies have been done to determine the safety and efficacy of CO₂-Laser therapy in treating GSM, and investigators recently conducted a systematic review and meta-analysis of all studies related to this topic from the last six years. Their search yielded a total of 25 studies, all of which looked at the effects of CO₂-Laser therapy on women with a diagnosis of VVA or GSM. (Women who had gynecological cancer, breast cancer, pelvic organ prolapse higher than stage 2, a history of pelvic radiotherapy, or Sjogren's Syndrome were excluded from this analysis). The studies, which included a total of 1,152 patients, measured patient outcomes in objective and subjective ways that varied depending on the study in question. Among the measurement tools employed were the Visual Analogue Scale (VAS) (which measures the severity of vaginal atrophy), the Female Sexual Function Index (FSFI) (which assesses female sexual function across six domains), and the Vaginal Health Index Score (VHIS) (which evaluates five components of the outermost tissue of the vagina). Even though the measurement tools varied by study, the researchers observed positive outcomes across the board. For example, all 25 studies showed a significant improvement in GSM symptoms including dryness, dyspareunia (painful intercourse), itching, burning, and painful urination. Additionally, when applicable, participants' scores from the subjective and objective measurement tools (such as the FSFI) improved, indicating better vaginal health or better sexual functioning. Though the results are promising, the heterogenous nature of the studies included in this literature review make it difficult to definitively state the potential benefits of CO₂-Laser therapy in treating GSM. What's more, a limited number of randomized controlled trials have been conducted on CO₂-Laser therapy, and it is not currently approved as a treatment. While it appears to be a generally safe option, and no adverse side effects were reported in the reviewed studies, this does not mean that adverse side effects are not possible. Further time and research will tell whether CO₂-Laser therapy has the potential to safely relieve symptoms in postmenopausal women who are struggling with GSM.

Submitter
Shotter Sophie

sophie@illuminateskinclinic.co.uk - United Kingdom

Presenter
Sophie Shotter

sophie@illuminateskinclinic.co.uk - United Kingdom

#8333

Defining 'Skin Quality' and how this impacts on how we improve it

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Sophie S¹

¹Illuminate Skin Clinic, London, United kingdom

Background/Objectives: Skin Quality is a term that we use so broadly in aesthetic medicine. But what does it mean? Has it ever been defined? In truth 'Skin Quality' encompasses many different features of skin. It's texture, how many wrinkles it has, how it feels, how firm it is, how hydrated it is, whether it's even toned, whether there are any blemishes, whether there are visible pores... So when we talk about improving skin quality, should we be encompassing all of those characteristics into a single treatment? Or should we be looking at the individual features of skin to create a 'Skin Quality Plan' unique to that individual, allowing us to address the unique features that individual needs to improve. With such a vast array of skin quality injectables and devices on the market, there are none that target all of these concerns. And so when we consult a patient whose skin needs improving, how do we select the right choice of treatment for them if we don't break 'Skin Quality' down further? Even within the realm of skin boosting injectables alone, we have numerous different treatment options which can provide someone with subtly different benefits. So how do we choose between products, apart from because the manufacturer tells us their product is best? In this talk I will dive into the different facets of skin quality to provide a proposed algorithm for how we can choose the best treatments to improve a patient's skin, by breaking skin quality into its separate components.

Submitter

Shotter Sophie

sophie@illuminateskinclinic.co.uk - United Kingdom

Presenter

Sophie Shotter

sophie@illuminateskinclinic.co.uk - United Kingdom

#8334

Where Aesthetics & Longevity Medicine Meet

77 - Unclassified topics

Sophie S¹

¹Illuminate Skin Clinic, London, United kingdom

Background/Objectives: Over the past decade, we have seen increasing conversation about the concept of longevity medicine thanks to the publication of the Cellular Hallmarks of Ageing in 2013. This has led to an increased understanding of the reasons why we age, and provided novel targets for treatments to influence how we age, our longevity and our healthspan. In the UK, this emerging field of 'Well Ageing' is intertwined with Aesthetics, with the 9/10 clinics which offer some form of wellness treatments also being aesthetic clinics. More recent research has also shown that the signs of skin ageing (particularly wrinkles) are an independent predictor for almost every single age associated disease, from Parkinson's Disease to Type 2 Diabetes. It is proposed that the damage in damaged, dysfunctional skin causes the release of various inflammatory mediators which circulate in the bloodstream and impact the health of other organs such as the heart and the brain. As the body's largest organ, it should be no surprise that it's health can have such a profound impact on systemic health.

Submitter
Shotter Sophie
sophie@illuminateskinclinic.co.uk - United Kingdom

Presenter
Sophie Shotter
sophie@illuminateskinclinic.co.uk - United Kingdom

#8335

Reputation Management in the Digital Age

73 - Marketing & Practice management

Sophie S¹

¹Illuminate Skin Clinic, London, United kingdom

Background/Objectives: Compared with a decade ago, how we communicate with our patients and the platforms we use have become exponentially more complex and numerous. In 2014 when I first set up my clinic, I had a website, a Facebook page and I outsourced many services such as telephone answering. Today with Instagram, TikTok, Threads, YouTube, a podcast, TrustPilot, Google Reviews...the list goes on... we are eminently more 'on show' and exposed than we have ever been. This can be an enormous positive, as these platforms give us an opportunity to educate and to communicate with potential patients. But what happens when an unhappy patient threatens that? I have found over the last few years an increasing trend towards patients using the threat of negative reviews or a social media campaign as a threat to achieve a goal (usually a refund). How can we manage this? What are the best approaches to maintain a strong reputation, when we are more exposed and vulnerable than ever before?

Submitter
Llano Francisco
franciscollano@hotmail.com - Mexico

Presenter
Llano Francisco
franciscollano@hotmail.com - Mexico

#8336

Exosomes, Polynucleotides, and Growth Factors: What can we Clinically use for Skin Rejuvenation?

51 - Regenerative aesthetics

Llano F

Background/Objectives: Fighting against aging is one of the main challenges of this century. Skin aging is an inevitable process driven by two overlapping factors, intrinsic and extrinsic, both of which decrease the structural integrity and physiological function of the skin. Intrinsic and extrinsic skin aging are cumulative processes that result in reduced dermal collagen levels and the development of elastosis. Histological evaluation reveals that sun-damaged skin has a flattened dermo epidermal interface with loss of dermal papillae, decreased dermal thickness and vascularity, decreased fibroblast activity, and haphazardly arranged, fragmented elastin fibers. The human integument serves as a barrier; it separates the body from the outside world and is thus subjected to more insults than most organs. Fine lines, wrinkles, sagging, and dehydrated skin are the first visible signs of aging. It has been hypothesized that skin aging is analogous to a wound that is sufficiently extensive to overwhelm the skin's inherent repair mechanisms, which become attenuated with age. Although the mechanism of skin aging is not fully understood, ROS accumulation can lead to lipid, protein, nucleic acid, and organelle damage

Submitter
Llano Francisco
franciscollano@hotmail.com - Mexico

Presenter
Llano Francisco
franciscollano@hotmail.com - Mexico

#8337

Regenerative Medicine applied to Aesthetic Medicine: What proven tools do we have?

51 - Regenerative aesthetics

Llano F

Background/Objectives: Cutaneous aging is a complex and continuous biological process characterized by cellular and molecular alterations, with progressive reduction of the body's natural capacity to maintain the homeostasis, senescence, and/or apoptosis of the dermal cells; Growth factors and cytokines (referred to collectively hereafter as GFs, control cell growth, proliferation, and differentiation via a network of inter and intracellular signaling pathways. There are striking parallels between the pathways involved in skin wound healing and those implicated in photoaging of the skin. In recent years, topical and injectable GFs have emerged as an intriguing therapeutic modality that can be harnessed for aesthetic and medical purposes. Fibroblast growth factors (FGF) have elicited studies to evaluate their role of repair and remodeling of the dermis during the skin anti-aging process, since they are regulatory proteins that mediate important signaling pathways and act on cell regeneration and repair processes. The FGF has a relevant role in anti-aging therapy because it is related to collagen and elastin synthesis activation responsible for skin resistance and elasticity, characteristics that are diminished with skin aging; Epidermal growth factor, in addition to being by itself an excellent generator of collagen and elastin that allows us from an aesthetic point of view to have firmer and more elastic skin, it is an excellent BOOSTER when supplemented with other growth factors and Hyaluronic Acid and / or with the use of its aesthetic medical equipment This lecture provides a review of available evidence for the role in skin regeneration of topical GFs, and of injectable GFs contained in autologous platelet-rich plasma (PRP). It presents data from recent studies of GFs, offers a discussion of their potential to serve as antiaging actives, and includes safety considerations.

Submitter
Wong Vincent
info@drvincentswong.com - United Kingdom

Presenter
Vincent Wong
info@drvincentswong.com -

#8338

The use of Mesh Scaffold in Non-Surgical Rhinoplasty

46 - Threads

Vincent W, Abdulrahman A

Background/Objectives: Non-surgical rhinoplasty has gained popularity as an alternative to traditional surgery, offering enhancements in nasal aesthetics without the need for invasive procedures. The Mesh Scaffold, a biodegradable polymer-based implant, has been introduced for its potential benefits in this field

Methods: A prospective study involving 50 patients was conducted to assess the efficacy, safety, and durability of the Mesh Scaffold in non-surgical rhinoplasty. The primary goal was to explore this novel implant's impact on nasal contour, symmetry, and projection.

Results: The Mesh Scaffold exhibited excellent handling characteristics, enabling precise placement and significant aesthetic improvements. Standardised photography and patient-reported outcome measures (PROMs) confirmed notable enhancements in nasal contour, symmetry and projection. Safety parameters were rigorously monitored, revealing minimal complications. The most common adverse events were temporary swelling and bruising, which resolved within a few days Satisfaction rate: High satisfaction with 90% of patients content at 6 months post-procedure. Durability: Scaffold showed lasting effects, suggesting its potential for enduring improvements in non-surgical rhinoplasty. Biocompatibility: Its biodegradable nature promotes seamless integration with nasal tissue, reducing complications.

Conclusions: The Mesh Scaffold has demonstrated promise as a safe, effective, and durable option for non-surgical rhinoplasty, marking a significant advancement in the field of nasal aesthetics.

Submitter
Teovska Mitrevska Natasa
nteovska@remedika.com.mk - Macedonia

Presenter
Natasa Teovska Mitrevska
nteovska@remedika.com.mk - Macedonia

#8339

Fractional Erbium-YAG Laser and Platelet-Rich Plasma as Combined Treatment for Acne Scars our experience

49 - Lasers, EBDs & Light

Natasa T

Background/Objectives: Acne scars are result of delayed and/or inadequate medical treatment and can develop despite appropriate medical therapy. Collagen and other tissue damage, secondary to inflammation of acne, leads to permanent skin texture changes and fibrosis. Scars typically proceed through a cascade of wound healing phases: inflammation, granulation, and remodeling.

Methods: Thirty patients with Fitzpatrick skin Type I and II were treated in the study with a combined treatment that included fractional ablative Erbium Yag laser (Fotona SP Dynamis) and application of PRP (Regen lab) after the laser. All patients gave informed consent. Here we present one of the cases treated with fractional Erbium Yag laser and application of PRP. Evaluations were performed using photographs taken immediately before the procedure. Photographs of the patients were reviewed by 2 blinded observer and improvement was graded on a scale of 1 to 4; 1 = 0% to 25%, 2 = 26% to 50%, 3 = 51% to 75%, and 4 = 76% to 100%. Adverse effects were recorded at each follow-up visit. Topical anesthesia with 10% lidocaine was applied to the face 30 minutes before therapy. An ablative fractional erbium laser (SP Dynamis, Fotona, Slovenia) was used to treat the scarred areas. Laser parameters included setting (FS01 hand piece), 60 J/cm², very long-pulse, turbo 4 (4 stacked pulses). Fractional erbium laser treatment causes bleeding. Sterile saline spray and sterile gauze was used to remove excess blood from the surface of the skin in between passes with the erbium laser. Then PRP (Regen lab) were applied to the skin. After 8 hours we advise the patient to clean the face with hydrogen peroxide 3 % twice a day with centella asiatica. The subject was evaluated by acne scar grading, photography, and subjective evaluation.

Results: Patient improvement was scored on a scale from 1 to 4. The results reveal marked efficacy of Fractional Erbium Yag laser with PRP in treating acne scars with an improvement in scar grade, clinical appearance, and patient satisfaction compared with their baseline measurements. After the procedure, erythema and small scabs should be expected to last 7 days. 3 sessions every 1 month are required to see the best results. The after picture was taken 1 month after the final treatment and no recurrence has been detected after 6 months follow-up with topical dermo-cosmetic products for maintenance.

Conclusions: Erbium fractional laser irradiation combined with PRP and PPP application is an effective and safe approach for improving acne scars and has minimal side effects.

References: 1. Tobin DJ. Moderate ascites identifies patients with low model for end-stage liver disease scores awaiting liver transplantation who have a high mortality risk. *Liver Transpl.* 2011;17(2):129-136. 2. Barba C, Alonso C, Sánchez I, Suer E, Saez L, Coderch L. Persistent ascites and low serum sodium identify patients with cirrhosis and low MELD scores who are at high risk for early death. *Hepatology.* 2004;40(4):802-810. 3. Cho BA, Yoo SK, Seo JS. Signatures of photo-aging and intrinsic aging in skin were revealed by transcriptome network analysis. *Aging.* 2018;10(7):1609-1626. 4. Chan HHL, Manstein D, Yu CS, Shek S, Kono T, Wei W1. The prevalence and risk factors of post - inflammatory hyperpigmentation after fractional resurfacing in Asians. *Lasers Surg Med.* 2007;39(5):381-385. 5. Donath AS. Facial rejuvenation: a chronology of procedures. *Textbook of Aging Skin.* Berlin Heidelberg: Springer; 2010:1175-1183. 6. Ulusal BG. Platelet-rich plasma and hyaluronic acid - an efficient biostimulation method for face rejuvenation. *J Cosmet Dermatol.* 2017;16(1):112-119. 6. Layton AM. Disorders of the sebaceous glands. In: Burns T, Breathnach S, Cox N, Griffiths C. *Rook's textbook of dermatology.* Oxford: Wiley; 2010. p. 43.1-43.74. 7. Nast A, Dréno B, Bettoli V, Degitz K, Erdmann R, Finlay A, et al. European evidence-based (S3) guidelines for the treatment of acne. *J Eur Acad Dermatol Venereol.* 2012;26 Suppl 1:1-29. 8. Zaenglein AL, Pathy AL, Schlosser BJ, Alikhan A, Baldwin HE, Berson DS, et al. Guidelines of care for the management of acne vulgaris. *J Am Acad Dermatol.* 2016;74:945-73. 9. Kränke B, Brabek E, Derhaschnig J, Aberer W. Acne excoriate—look for allergy! *Dermatology.* 2001;203:256-7.

Submitter
Teovska Mitrevska Natasa
nteovska@remedika.com.mk - Macedonia

Presenter
Natasa Teovska Mitrevska
nteovska@remedika.com.mk - Macedonia

#8340

Treatment of Lichen sclerosus with Erbium Yag laser - case series

49 - Lasers, EBDs & Light

Natasa T

Background/Objectives: Lichen sclerosus (LS) is an inflammatory skin disease that usually involves the anogenital area where it causes itching and soreness, sexual dysfunction, can occur in both men and woman and is associated with genital cancer. The course of LS can be chronic. Treatment remains unsatisfactory, in particular in women as disabling scar formation is common despite treatment. The Er:YAG laser with specific nonablative modality, which causes shrinkage of collagen fibers and consequently triggers neocollagenesis, might be another therapeutic option for lichen sclerosus, where an alteration in the distribution of collagen is very important

Methods: From the period of 2020 March till 2022 December, we treated 22 women between the ages of 35 and 65 years, diagnosed with vulvar LS, confirmed with biopsy. The patients were treated with an Erbium:Yag Fotona SP Dynamis laser. No topical steroids were used in these patients. Topical anesthesia was applied with EMLA cream.

Results: the first session, the Er:YAG laser (SP Dynamis, Fotona, Slovenia) was applied with a R11 handpiece with fluence of 7 J/cm², 2 Hz, and spot of 7 mm in continuous application. Then Er:YAG treatment modality (Fotona SMOOTH mode) that causes gentle coagulative heating of the skin was used. The modality delivers laser energy onto the skin in a fast sequence of low-fluence laser pulses inside an overall super-long pulse of 200 ms to 350 ms. Every so often when the area whitened, it was cleaned with gauze soaked in physiologic fluid After analysis of each scoring component, individual statistically significant reductions were observed in itching, pain, ecchymosis, excoriations. 3 of 22 patients in the laser group were free of symptoms at 1 month follow-up. Four of 19 patients in the laser group were free of symptoms at 3-month follow-up

Conclusions: Laser treatment with Erbium Yag laser was well tolerated by patients

References:Kirtschig G. Lichen sclerosus-presentation, diagnosis and management. Dtsch Arztebl Int 2016;113:337-43. Kirtschig G, Becker K, G€unther A, et al. Evidence-based (S3) guideline on (anogenital) lichen sclerosus. J Eur Acad Dermatol Venereol 2015;29:e1-43. Casanova D, Alliez A, Baptista C, et al. A 1-year follow-up of post-operative scars after the use of a 1210-nm laser-assisted skin healing (LASH) technology: a randomized controlled trial. Aesthetic Plast Surg 2017;41:938-48. Cooper SM, Powell JJ, Wojnarowska F. Does treatment of vulvar lichen sclerosus influence its prognosis? Arch Dermatol 2004;140:702-6. 13. Sheinis M, Selk A. Development of the adult vulvar lichen sclerosus severity scale - a Delphi consensus exercise for item generation. J Low Genit Tract Dis 2018;22:66-73. Lee A, Lim A, Fischer G. Fractional carbon dioxide laser in recalcitrant vulvar lichen sclerosus. Australas J Dermatol 2016;57:39-43. Origoni M. Fractional carbon dioxide laser in recalcitrant vulvar lichen sclerosus [letter]. Australas J Dermatol 2017;58:e157-8. Stuart GC, Nation JG, Malliah VS, et al. Laser therapy of vulvar lichen sclerosus et atrophicus. Can J Surg 1991;34:469-70. Halonen P, Jakobsson M, Heikinheimo O, Gissler M, Pukkala E. Incidence of lichen sclerosus and subsequent causes of death: a nationwide Finnish register study. BJOG. 2020;127: 814-819. 2. Kirtschig G, Becker K, Günther A, Jasaitiene D, Cooper S, Chi CC, et al. Evidence-based (S3) Guideline on (Anogenital) Lichen sclerosus. J Eur Acad Dermatol Venereol. 2015;29: e1-e43. Sargeant HA, O'Callaghan F. Predictors of psychological well- being in a sample of women with vulval pain. J Reprod Med. 2009;2:109-116. Sargeant HA, O'Callaghan F. The impact of chronic vulval pain on quality of life and psychosocial well-being. Aust N Z J Obstet Gynaecol. 2007;47(3):235-239. Halonen P, Jakobsson M, Heikinheimo O, Riska A, Gissler M, Pukkala E. Lichen sclerosus and risk of cancer. Int J Canc. 2017;140(9):1998-2002 Li J. The study of CO2 laser and triamcinolone acetonide in the treatment of vulvar lichen sclerosus. Int J Gynecol Obstet. 2018;143 ((Suppl 3)):322. Bagdish MS. Fractional CO2 laser treatment for vaginal atrophy and vulvar lichen sclerosus. J Gynecol Surg. 2016;32: 309-317. Coyle M. The safety and efficacy of ablative fractional ER:Yag laser treatment for vulvar lichen sclerosus. J Sex Med. 2018;15 ((Suppl 2)):S116

Submitter
Makropoulou Elena
makropoulouel@gmail.com - Greece

Presenter
Makropoulou Elena
makropoulouel@gmail.com - United Kingdom

#8341

Severe migraine after botulinum toxin treatment in the upper face, a case report and a retrospective study on migraine and headaches incidence, causality and prevention.

48 - Complications - avoidance and management

Makropoulou E¹, Silva A¹

¹University of South Wales, Cardiff, United kingdom

Background/Objectives: Botulinum toxin-A (BoNT-A) is FDA-approved for treating chronic migraine. A paradox is that headache is a side effect of BoNT-A treatment in the upper face for cosmetic purposes. This has been attributed to the initial muscle spasm caused by the toxin prior to paralysis, to the needle hitting the periosteum, deep muscle hematomas, and the stress of the injections. Most of the headaches are mild and resolve within a few days, however, sometimes they persist for up to 4 weeks. So far, there is limited evidence on the frequency of headache occurrence and its clinical features following BoNT-A for aesthetic purposes and none on migraine.

Methods: We will present a rare case where the patient experienced severe migraine with aura following BoNT-A administration on the upper face for cosmetic purposes. The patient was admitted to the Ioannina Medical School University Hospital (Greece) with numbness in her limbs and serious discomfort in her gastrointestinal system. The diagnosis given by the doctors was inconclusive with pathologists stating it was a type of allergy and gastroenterologists stating it was allantiasis associated with BoNT-A administration. Since September 2023 we have been conducting a retrospective study on 65 patients from 3 clinics located in Greece. Inclusion criteria were previous reports of headache or migraine post-BoNT-A treatment for cosmetic purposes and therefore purposive sampling was used based on patient records. Data is being collected from questionnaires which are distributed by phone, online, and in person. Qualitative data are coded while quantitative data analysis is performed with SPSS software. All participants have given written informed consent and understood they can withdraw at any time.

Results: Our primary findings suggest that BoNT-A treatment for cosmetic purposes may trigger headaches and migraine with/without aura. Beyond a history of migraines, no other medical condition was found to be associated with the occurrence of migraines/headaches. Age has not been found to play a role. An association with treatment performed for the first time and with injection points at the nasalis has been found. Pain may last from 1 day to 4 weeks and usually can be resolved with NSAIDs. Prevention with muscle relaxants can be considered in such patients. We believe that the patient admitted to the hospital experienced migraine with aura which caused her a panic attack. The final results will be ready by September 2024 and can be presented at the AMWC Southeast Asia conference.

Conclusions: BoNT-A treatment for cosmetic purposes may trigger facial pain that ranges from mild headaches to migraine with aura. There seems to be an association of such incidents with treatment sequence, injection sites, and history of migraines. Symptoms usually resolve within a week with the administration of NSAIDs. Prevention with muscle relaxants may be considered.

References: Alam M, Arndt KA, Dover JS. (2002) Severe, intractable headache after injection with botulinum a exotoxin: report of 5 cases. *J Am Acad Dermatol.* 46: 62-65. Mullaaziz, D., & Kaptanoğlu, A. (2022). Is botulinum toxin a cause or a cure for headaches?. *Journal of cosmetic dermatology*, 21(2), 595–599. <https://doi.org/10.1111/jocd.14656> Naumann M, Jankovic J. (2004) Safety of botulinum toxin type A: a systematic review and meta-analysis. *Curr Med Res Opin.*, 20: 981-990. Sethi N, Singh S, DeBouille K, Rahman E. A review of complications due to the use of botulinum toxin A for cosmetic indications. *Aesthetic Plast Surg.* 2021; 45: 1210-1220. Small R. (2014) Botulinum toxin injection for facial wrinkles. *Am Fam Physician.* 90:168–75. Vartanian AJ, Dayan SH. (2005) Complications of botulinum toxin A use in facial rejuvenation. *Facial Plast Surg Clin North Am.* ;13:1–10. Witmanowski, H., & Blochowiak, K. (2020). The whole truth about botulinum toxin - a review. *Postępy dermatologii i alergologii*, 37(6), 853–861. <https://doi.org/10.5114/ada.2019.82795>

Submitter
Thulesen Jesper
d057010@dadlnet.dk - Denmark

Presenter
Thulesen Jesper
j.thulesen@dadlnet.dk - Denmark

#8345

Botulinum neurotoxins, loss of response. Is it immunogenicity?

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Thulesen J

Background/Objectives: There are several possible reasons for loss of response to botulinum neurotoxins, including misplaced toxin, suboptimal dosing, product administration with denaturation by improper storage or handling, and errors in reconstitution. However, frequent injections of a foreign protein like neurotoxins increase the body's immune response and may also increase the risk of antibody formation. The formation of antibodies may lead to antibodies that have no effect on treatment or to neutralizing antibodies that may result in partial or complete clinical unresponsiveness to the treatment. In addition to the facts and myths behind neutralizing antibodies, this presentation will focus on the clinical evidence of immunological resistance after repeated neurotoxin injections, the clinical conditions that should raise suspicion and trigger investigations, and the clinical consequences as well as the solutions.

Submitter
Thulesen Jesper
d057010@dadlnet.dk - Denmark

Presenter
Thulesen Jesper
j.thulesen@dadlnet.dk - Denmark

#8346

CO2-laser Surgery for Changing Asian Monolids to Double Eyelids

56 - Minimally invasive surgery / Minimally invasive advances

Thulesen J

Background/Objectives: Eyelid shape is one distinctive feature of the Asian eye with an increasing demand for double eyelid plasty. These procedures transfer monolids to double lids with a crease. Several surgical procedures are available, but the most robust results are obtained by the 'open incisional procedure'. Here we describe a variation of this procedure with the use of CO2-laser. This coagulative procedure facilitates per-operative visualization/identification of anatomical structures to ensure optimized results. Preoperatively, crease height is marked, and a few mm (1-3 mm) of skin are then excised with CO2-laser. The exposed orbicular muscle tissues are then laser-treated in a defocused mode to tight-up the tissues by retraction. A laser-mediated horizontal incision in the orbicular muscle superior of the upper tarsal plate (approximately 6-8 mm above the eyelid margin) is made, and the aponeurosis of the levator muscle appears apparent. Laser-generated 'buttonhole' incisions in the aponeurosis serve to excise preaponeurotic fat. Six-to-eight single Silk 6-0 stitches are placed between the aponeurosis and skin to pull the dermis/skin profound. The skin incision in the eyelid is closed by Prolene 6-0 with a continuous running suture technique. Postoperatively, antibiotic oilment is applied daily for two-to-three weeks until removal of all stitches. Patients are evaluated after six-to-eight-months. The procedure provides reproduceable and predictive results.

Submitter
Gonzalez Rodolfo
drgonzalezreynoso@gmail.com - Mexico

Presenter
Gonzalez Rodolfo
drgonzalezreynoso@gmail.com - Mexico

#8347

2mm incision for 5 minutes bicectomy

56 - Minimally invasive surgery / Minimally invasive advances

Gonzalez R

Background/Objectives: Bicectomy is a minimally invasive treatment with awesome results for the correct patient. It can make a face look more beautiful in women and in men, just because of the anatomical situation, the same technique can be performed in both with different results. A look like simple technique using a 2mm incision can be performed to make the bicectomy in 5 minutes or less, doing it right with the correct technique is really safe for the patient and simple for the doctor.

Submitter
Makropoulou Elena
makropoulouel@gmail.com - Greece

Presenter
Makropoulou Elena
makropoulouel@gmail.com - United Kingdom

#8348

Smile design: Treatment approaches and considerations when performing lips enhancement

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Makropoulou E¹, Silva A¹

¹University of South Wales, Cardiff, United kingdom

Background/Objectives: Recent data have shown that the demand for minimally invasive aesthetic treatments will rise in the coming years. Lips augmentation is one the most popular procedures and a 'beautiful smile' is often requested in aesthetic clinics since smiling is the most important nonverbal way of expressing emotions. Designing a smile can be challenging sometimes. According to the existing literature, three factors must be considered for creating the perfect smile: the lip framework, the teeth, and gingiva exposure. Therefore, when designing lip beautification treatments, a practitioner should consider the lips' balance with other facial features such as the nose, the maxilla, and the mandible position. The patient should be asked to pose in a smiling position so that a smile in harmony with the teeth and the gingiva scaffold is created. In this context, lips positioned in aesthetically pleasing profiles, fuller in size, with ideal upper-to-lower projection and vertical height ratios are considered most attractive. Upper lip curvature and symmetry primarily depend on neuromuscular factors and contribute to a beautiful smile. Teeth shape, size, position (rotations, spacing, and midline coincidence of upper and lower teeth), and alignment (the sagittal position and inclination of the upper front teeth) are responsible for lips' support. The anterior teeth exposure majorly contributes to a harmonic smile design. Teeth colour should also be considered in the design as whiter shades are recognised as more youthful and attractive. Additionally, the gingival margin of the central incisor should ideally be at the same level as the canine's margin, and slightly higher than that of the lateral incisors so that gingival exposure upon smiling is limited to up to 3 mm. In this presentation, we will show patients with different occlusal planes and gingival displays who have received lip beautification treatments. The cases include people where lip fillers and botulinum toxin have been used either alone or together and occasionally with concomitant teeth alignment through prosthodontics. We will support our approach with existing literature.

Submitter
Parra Hernández Luis Alberto
gerencia@drluisalbertoparra.com - Colombia

Presenter
Parra Luis
gerencia@drluisalbertoparra.com - Colombia

#8352

A novel hybrid BonT-A and hyaluronic acid cannula-based technique for eyelid ptosis and periorbital rejuvenation

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Parra L¹

¹Sociedad Internacional de Rejuvenecimiento Facial SIRF, Barranquilla, Colombia

Background/Objectives: Eyelid ptosis is characterized by an inferior displacement of the upper eyelid when the eye assumes its primary position. Besides its aesthetic implications, ptosis can also adversely affect visual acuity. This study aimed to evaluate the simultaneous administration of IncobotulinumtoxinA (IncoBonTA) and hyaluronic acid effect in eyelid ptosis and ocular rejuvenation.

Methods: A novel, non-surgical technique for eyelid ptosis management involving IncoBonTA and hyaluronic acid the co-administration within a single syringe, and applied using a cannula.

Results: The dual action of IncoBonTA and hyaluronic acid in conjunction with the exact injection sites approaches improves overall aesthetic outcomes but also optimizes the restoration of eyelid functionality in palpebral ptosis.

Conclusions: The functional balance achieved among the contributory muscles—primarily the orbicularis oculi (OO) and its antagonists, the frontal muscle and levator palpebrae superioris (LPS), yields to both, cosmetic and functional.

References:<https://onlinelibrary.wiley.com/doi/10.1111/jocd.16264>

Submitter
Silva Ana
ana.cristina@learna.ac.uk - Brazil

Presenter
Makropoulou Elena
makropoulouel@gmail.com -

#8357

Updates in the management of vascular occlusion following hyaluronic acid injection – a case report using a 22-gauge cannula

48 - Complications - avoidance and management

Ana S¹, Makropoulou E

¹University of South Wales/Learna, Ipatinga, Brazil

Background/Objectives: Hyaluronic acid (HA) fillers have demonstrated an incredibly growing popularity all around the world, and amongst all social and ethnical groups. Unfortunately, and concomitantly to this ascendant trend, the number of complications has increased. We aim to present a case report of vascular occlusion (VO) following lip augmentation with cannula and a literature review on the topic, in particular, VO management current guidelines and cannula safety.

Methods: This is a case report of a 44-year-old woman who presented for a cosmetic consultation regarding her thin lower lip (picture 1). The patient has agreed and signed an informed consent form for using her case and pictures for academic purposes. It has been proposed hyaluronic acid (HA) filler injection in that area. The procedure was performed using 1ml of Juvederm Ultra (Allergan®) through a 22G cannula, with entry points 0.5cm laterally to the oral commissures. Two points of needle application have been done into the cupid's bow. Immediately after the intervention, the patient complained of pain at the right side of the lower lip. A blanching area and a bluish skin discoloration were also apparent (picture 2). Skin examination demonstrated oedema, livedo reticularis (mottled skin) and a delayed capillary refill time (> 3 seconds) (picture 3).

Results: A 1,500IU vial of hyaluronidase was immediately reconstituted in 1ml saline + 1ml lidocaine, and directly injected over the course of the lower lip artery and the wider area of ischemia, using the same cannula. Warm compress and vigorous massage were applied to produce vasodilation. In addition, the patient received an intramuscular injection of betamethasone, to reduce inflammation and oedema. One hour later, there was no pain and the capillary refill time was normal (< 2 seconds) (picture 4). The patient was discharged and evolved with a black mucosae discoloration 24 hours later, but no signs of infection or necrosis (picture 5). The current guidelines on the management of VO caused by fillers state the benefits of applying a larger dose of 1,500IU of hyaluronidase, in contrast to the old protocols, that recommended daily injections of lower doses (450-600IU). It has been postulated that higher hyaluronidase doses are more effective, safe and do not harm the normal skin. It is important to use 1ml of 2% lidocaine in its reconstitution, due to its vasodilation properties. Formerly, there was a belief that the risk of a vascular occlusion following HA fillers injections was higher when using needles. However, the current literature suggests that the safety of cannula injections may be overestimated. Zhou et al. (2020) reported 28 cases of severe HA embolism, including 10 cases of blindness (one with stroke), and 18 cases of skin necrosis. Interestingly, they found that cannulas (22–27G) were used in 25 of those 28 patients.

Conclusions: Cannula injection of HA fillers may not be as safe as previously thought. In particular, cannulas smaller than 25G must be avoided due to the increased risks of vascular cannulation, embolism and occlusion. The authors of this case report have successfully followed the current recommendations for the management of VO due to HA filler: (1) infiltration of a larger amount of hyaluronidase in the affected site; (2) warm compress; (3) vigorous massage to promote vasodilation and a mechanical breakdown of the HA particles; and (4) corticosteroid administration.

References: Middleton EO. Evidence-based clinical guide for the management of peripheral vascular occlusion with hyaluronic acid, report of 6 successful cases. *Advances in Oral and Maxillofacial Surgery*, Volume 8, 2022, 100367, ISSN 2667-1476, <https://doi.org/10.1016/j.adoms.2022.100367>; Murray G, Convery C, Walker L, Davies E. Guideline for the Management of Hyaluronic Acid Filler-induced Vascular Occlusion. *J Clin Aesthet Dermatol*. 2021 May;14(5):E61-E69. Epub 2021 May 1. PMID: 34188752; PMCID: PMC8211329; Viridi GS, Spotswood E. Case Report: Peri-oral Vascular Compromise Due to Calcium Hydroxyapatite. *Plast Reconstr Surg Glob Open*. 2022 May 18;10(5):e4193. doi: 10.1097/GOX.0000000000004193. PMID: 35620495; PMCID: PMC9116953; Zhou SB, Chaing, MD, Liu, K. False sense of safety: blunt cannulas cause the majority of severe vascular complications in hyaluronic acid injection. *Plast Reconstr Surg*. 2020;146(2):240e–241e.

Submitter
Vermeylen Jan
JVERMEYLEN2411@gmail.com - Belgium

Presenter
Vermeylen Jan
jvermeylen2411@gmail.com -

#8358

The M.A.E.S. lift. A minimal acces extra suspension lift.

56 - Minimally invasive surgery / Minimally invasive advances

Vermeylen J

Background/Objectives: The Minimal Access Extra Suspension lift is a very advanced face and neck lifting procedure based on the classical Macs lift though dealing with the disadvantages of the macs lift. A single surgeon's experience in over 600 face lift procedures under local anesthesia is presented. The M.A.E.S. lift technique deals with the insufficient neck correction, insufficient jowl correction and the preahairline scar which are the typical drawbacks of the classical Macs lift. By using threadlifting techniques in combination with advanced surgical techniques the undermining of the skin is even less then in other face and neck lift procedures. Because of this purified technique the chances of complications are extremely low and the procedure can make secondary facelift procedures more safe to excecute. Individual differences in facial aging , as jowl position and malar sagging, can be addressed more accurately. Neck corrections can be achieved easily by extending the incision a few cm postauricular. The principals of the M.A.E.S. lift can be used in the face, face and neck, and necklifting procedures. Due to the surgical advancement the recovery time is very quick. Most patients can resume their social activities in one week. The procedure takes 60-90 minutes under local anesthesie using KLein's solution and is performed on an outpatient basis. The aim of the procedure is to achieve as natural as possible facial rejuvenation with as low as possible complication rates and a very short downtime. After the procedure patients look rejuvenated and not lifted!

Submitter
Jacobs Jordan
jordancjacobs@icloud.com - United States

Presenter
Jacobs Jordan
JordanJacobsNYC@icloud.com -

#8360

Bright Eyes: Mastering Tear Trough Filler

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Jacobs J

Background/Objectives: Objectives: 1. Identify critical anatomical structures of the periorbital region 2. Recall a simple 3-step method for the periorbital assessment 3. Categorize the type of deficiency based on assessment Background: The tear trough deficiency is a loss of volume under the eyes and can be treated non-surgically with various facial fillers. A simplified and reproducible technique should encourage more Aesthetic Physicians to confidently address and execute this region.

Methods: Selection of the appropriate filler product depends on the type of deformity the patient has; whether it is hyperpigmentation, tissue atrophy, herniated fat, excess skin laxity or edematous eyes. The preferred method of tear trough enhancement is using a 30 gauge needle to deliver the product to the periosteum. First, the practitioner must palpate the bony region just inferior to the orbital rim to assess the orientation and framework of the underlying structure. Directly insert the needle perpendicular to the platform of the bone, carefully delivering microboluses of the filler while gently walking it towards the medial aspect of the tear trough. Once the extent of the needle length is reached, the needle should be withdrawn and reinserted, repeating this motion until the entire tear trough is complete. Aiming for an 70-80% improvement while instructing the patient to return for a follow-up treatment creates higher satisfaction rates with lower incidents of complications.

Results: Through empirical evidence and close post-procedure monitoring, over 100 patients between the ages of 18 and 80 years of age were treated and showed immediate improvements of the periorbital region including the tear trough. Improvements include decreased hollowing, increased brightness (due to light reflection) and decreased laxity of the skin. Oedema, erythema and tenderness occurred a few days to weeks postinjection, with a few cases of minor ecchymosis. After 4 to 6 weeks, skin discoloration, quality, tone, and integrity improved noticeably. Five patients of different tear trough deformity and product selection were selected to illustrate the effectiveness of this technique.

Conclusions: Directly treating the tear trough with filler augmentation has proven to effectively treat and rectify the common concerns of eye bags, under eye hollowing, dark circles and lower eyelid skin laxity. This study illustrates the value of a simplified and reproducible technique which consistently gives a predictable result with minimal safety risks and optimal outcomes. Patient satisfaction is maximized as provider confidence increases, improving the delivery method and decreasing the rate of complications.

References: Corduff, Niamh. An Alternative Periorbital Treatment Option Using Calcium Hydroxyapatite for Hyperpigmentation Associated with the Tear Trough Deformity. PRS Global Open. 2020;8:e2633. Syed N. Hussain MD, Sonia Mangal MBBS, Greg J. Goodman MBBS. The Tick technique: A method to simplify and quantify treatment of the tear trough region. Wiley Periodicals Inc. 2019;18:1642-1647.

Submitter
Sandoval Vásquez Ricardo
ricardosandovalspecialista@gmail.com - Colombia

Presenter
Sandoval Ricardo
ricardosandovalspecialista@gmail.com -

#8361

New way to approach the Midface: Focusing on Restructuring and redensifying with Hybrids

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Sandoval R

Background/Objectives: Objectives: Demonstrate the effect of a technique based on restructuring and redensification of the midface, with the application of injectable hybrids with adequate rheological properties, achieving favorable results in patients, with lower injection volumes.

Introduction: During the development of facial aesthetic medicine and especially in facial rejuvenation, the possibility of multiple injectable treatments has been developed to improve volume loss, projection or stimulation of collagen, in patients who present a physiological process of facial aging, having into account, the middle third as a specific therapeutic target, however, this requires high injection volumes, multiple syringes, greater risk to patients and tends to generate a negative economic impact for all of them. Materials / method: An injection technique for the middle third of the face is presented based on sequential structural points of the face and redensification areas, using low volumes of hybrid products, combined with amino acids or collagen biostimulators, with adequate rheology, with the aim of treating the main anatomical changes generated by facial aging, while generating redensification of facial tissues.

Submitter
Hersant Barbara
barbara.hersant@gmail.com - France

Presenter
Hersant Barbara
barbara.hersant@gmail.com -

#8362

Ultrasound Assisted Liposuction for lower limb lipedema: a monocentric prospective study of 191 patients

50 - Body contouring & skin tightening

Hersant B

Background/Objectives: Lipedema, a chronic condition affecting around 11% of females, is characterized by abnormal fat deposition in the lower limbs, leading to disproportionate body morphology and functional impairments. Often misdiagnosed, its etiology remains unclear, with conservative treatments typically employed initially. Surgical options, such as lymphatic-sparing liposuction, may be considered for those with inadequate response to conservative therapy. While water-assisted and tumescent-assisted liposuction is established, ultrasound-assisted liposuction (UAL) has emerged as a promising alternative. This study aims to assess the efficacy and safety of standardized lymphatic-sparing UAL for lower limb lipedema following six months of conservative treatment.

Methods: prospective study has been performed on 191 patients with lower limb lipedema (stage 1-3) who underwent two stages lymphatic-sparing Ultrasound-Assisted Liposuction (UAL) after six months of conservative treatment. Standardized protocols were followed for anesthesia, surgery, and postoperative care. Outcome measures included changes in pain assessment using visual analog scales, pannus thickness, aesthetic and quality of life satisfaction and documentation of complications both before and 12 months following complete surgical treatment.

Results: We present findings from a cohort study involving 191 female patients diagnosed with type 3 lipedema affecting the lower limbs. The average age at initial surgery was 38.5 ± 10.5 years, with a mean BMI of 26.8 ± 4 kg/m². Stage distribution was 12.04% at stage 1, 29.31% at stage 2, and 58.63% at stage 3. Notably, the average duration of hospitalization was 3.2 ± 1.6 days, with an average fat aspirate of $9 \pm 1.4\%$ of body weight. Postoperative outcomes showed significant reductions in circumferences across all measured areas ($p < 0.001$). Pain levels, sensitivity to touch, bruising, and other discomforts significantly decreased post-liposuction (all $P < 0.0001$). Complication rates were within expected ranges, with no instances of postoperative phlebitis. Patients reported high levels of satisfaction and improved quality of life post-treatment. These findings underscore the effectiveness and safety of liposuction in managing type 3 lipedema, offering valuable insights for clinical practice.

Conclusions: The integration of a comprehensive medical protocol for managing lipedema alongside the utilization of the latest-generation lymphatic-sparing UAL in two-stage procedures for the lower limbs shows promising potential. Long-term follow-up studies are necessary to confirm sustained efficacy.

References: [1] Foldi E, Foldi M. Lipedema. In: Foldi M, Foldi E, editors. *Foldi's Textbook of Lymphology*. Munich, Germany: Elsevier GmbH; 2006. p.417-27. n.d. [2] Herbst, K.L.; Kahn, L.A.; Iker, E.; Ehrlich, C.; Wright, T.; McHutchison, L.; Schwartz, J.; Sleigh, M.; MC Donahue, P.; Lissou, K.H.; et al. Standard of care for lipedema in the United States. *Phleb. Phleb.* 2021, 36, 779–796. n.d. [3] Forner-Cordero I, Forner-Cordero A, Szolnoky G. Update in the management of lipedema. *Int Angiol* 2021;40. <https://doi.org/10.23736/S0392-9590.21.04604-6>. [4] The management of lipoedema - Wounds UK 2017. <https://wounds-uk.com/best-practice-statements/management-lipoedema/> (accessed April 11, 2024). [5] Herpertz U. Krankheitsspektrum des Lipödems an einer Lympholo-gischen Fachklinik Erscheinungsformen, Mischbilder und Behand lungsmöglichkeiten. *Vasomед*. 1997;6:301–7. n.d. [6] Meier-Vollrath I, Schneider W, Schmeller W. Lipödem: Verbesserte Lebensqualität durch Therapiekombination. *Dtsch Arztebl* 2005;102:A1061–7. n.d. [7] Child AH, Gordon KD, Sharpe P, Brice G, Ostergaard P, Jeffery S, Mortimer PS. Lipedema: an inherited condition. *Am J Med Genet A*. 2010 Apr;152A(4):970–6. n.d. [8] Wagner S. Lymphedema and lipedema - an overview of conservative treatment. *Vasa*. 2011 Jul;40(4):271–9. n.d. [9] Cavezzi A. Medicine and Phlebolympheology: time to Change? *J Clin Med* 2020;9:4091. n.d. [10] Kruppa P, Georgiou I, Biermann N, Prantl L, Klein-Weigel P, Ghods M. Lipedema—Pathogenesis, Diagnosis, and Treatment Options. *Deutsches Ärzteblatt International* 2020. <https://doi.org/10.3238/arztebl.2020.0396>. [11] Bertsch T, Erbacher G. Lipedema – myths and facts Part 3. *Phlebologie* 2018;47:188–97. n.d. [12] Pouwels S, Huisman S, Smelt HJ, Said M, Smulders JF. Lipedema in patients after bariatric surgery: report of two cases and review of literature. *Clin Obes* 2018;8:147–50. n.d. [13] Dadras M, Mallinger PJ, Cortier CC, Theodosiadi S, Ghods M. Liposuction in the Treatment of Lipedema: A Longitudinal Study. *Arch Plast Surg* 2017;44:324–31. <https://doi.org/10.5999/aps.2017.44.4.324>. [14] Bauer A-T, Von Lukowicz D, Lossagk K, Aitzetmueller M, Moog P, Cerny M, et al. New Insights on Lipedema: The Enigmatic Disease of the Peripheral Fat. *Plastic & Reconstructive Surgery* 2019;144:1475–84. <https://doi.org/10.1097/PRS.0000000000006280>. [15] Ghods M, Georgiou I, Schmidt J, Kruppa P. Disease progression and comorbidities in lipedema patients: A 10-year retrospective analysis. *Dermatologic Therapy* 2020;33. <https://doi.org/10.1111/dth.14534>. [16] Witte, T.; Dadras, M.; Heck, F.-C.; Heck, M.; Habermalz, B.; Welss, S.; Lehnhardt, M.; Behr, B. Water-jet-assisted liposuction for the treatment of lipedema: Standardized treatment protocol and results of 63 patients. *J. Plast. Reconstr. Aesthetic Surg.* 2020, 73, 1637–1644 n.d. [17] Baumgartner, A.; Hueppe, M.; Meier-Vollrath, I.; Schmeller, W. Improvements in patients with lipedema 4, 8 and 12 years after liposuction. *Phleb. J. Venous Dis.* 2020, 36, 152–159. n.d. [18] Rapprich S, Dingler A, Podda M. Liposuction is an effective treatment for lipedema—results of a study with 25 patients. *J Deutsche Derma Gesell* 2011;9:33–40. <https://doi.org/10.1111/j.1610-0387.2010.07504.x>. [19] Schlosshauer T, Heiss C, Von Hollen A, Spennato S, Rieger UM. Liposuction treatment improves disease-specific quality of life in lipedema patients. *International Wound Journal* 2021;18:923–31. <https://doi.org/10.1111/iwj.13608>. [20] Wollina U, Heinig B. Treatment of lipedema by low-volume micro-cannular liposuction in tumescent anesthesia: Results in 111 patients. *Dermatologic Therapy* 2019;32:e12820. <https://doi.org/10.1111/dth.12820>. [21] Schmeller W, Hueppe M, Meier-Vollrath I. Tumescent liposuction in lipedema yields good long-term results: Tumescent liposuction in lipedema. *British Journal of Dermatology* 2012;166:161–8. <https://doi.org/10.1111/j.1365-2133.2011.10566.x>. [22] Schmeller, W.; Meier-Vollrath, I. Tumescent liposuction: A new and successful therapy for lipedema. *J. Cutan. Med. Surg.* 2006, 10, 7–10. n.d. [23] Buso G, Favre L, Vionnet N, Gonzalez-Rodriguez E, Hans D, Puder JJ, Dubath C, Eap CB, Raffoul W, Collet TH, Mazzolai L. Body Composition Assessment by Dual-Energy X-Ray Absorptiometry: A Useful Tool for the Diagnosis of Lipedema. *Obes Facts*. 2022;15(6):762–773. n.d. [24] High Definition Body Sculpting: Art and Advanced Lipoplasty Techniques Alfredo E. Hoyos, Peter M. Prendergast n.d. [25] Vitorasso CDSR, Silva ACB, Batista BPDNS, Kamamoto F. Lymphatic Improvement after Suction-assisted Lipectomy in a Lipedema Patient. *Plastic and Reconstructive Surgery* - Global Open 2023;11:e5097. <https://doi.org/10.1097/GOX.0000000000005097>. [26] Trott SA, Rohrich RJ, Beran SJ, Kenkel JM, Adams WP, Robinson JB. Sensory changes after traditional and ultrasound-assisted liposuction using computer-assisted analysis. *Plast Reconstr Surg* 1999;103:2016–25; discussion 2026–2028. <https://doi.org/10.1097/00006534-199906000-00033>. [27] Jewell ML, Fodor PB, de Souza Pinto EB, Al Shammari MA. Clinical application of VASER—assisted lipoplasty: a pilot clinical study. *Aesthet Surg J* 2002;22:131–46. <https://doi.org/10.1067/maj.2002.123377>. [28] Ruff PG, Garcia O, Nykiel MJ, Galanis CJ. Consensus-based Recommendations for Vibration Amplification of Sound Energy at Resonance Ultrasound-assisted Liposuction. *Plast Reconstr Surg Glob Open* 2023;11:e5110. <https://doi.org/10.1097/GOX.0000000000005110>. [29] Le Louarn C, Pascal JF. [Internal faces lifting legs complications]. *Ann Chir Plast Esthet* 2004;49:610–3. <https://doi.org/10.1016/j.anplas.2004.10.010>. [30] Wright TF, Herbst KL. A Case Series of Lymphatic Injuries After Suction Lipectomy in Women with Lipedema. *Am J Case Rep* 2022;23. <https://doi.org/10.12659/AJCR.935016>. [31] Illouz YG. Body contouring by lipolysis: a 5-year experience with over 3000 cases. *Plast Reconstr Surg* 1983;72:591–7. <https://doi.org/10.1097/00006534-198311000-00001>. [32] Jeffrey A. Klein, M.D. The Tumescent Technique for Liposuction Surgery. n.d. [33] Hoffmann JN, Fertmann JP, Baumeister RGH, Putz R, Frick A. Tumescent and dry liposuction of lower extremities: differences in lymph vessel injury. *Plast Reconstr Surg* 2004;113:718–24; discussion 725–726. <https://doi.org/10.1097/01.PRS.0000101506.84361.C9>. [34] Shridharani SM, Broyles JM, Matarasso A. Liposuction devices: technology update. *Med Devices (Auckl)* 2014;7:241–51. <https://doi.org/10.2147/MDER.S47322>. [35] Beidas OE, Gusenoff JA. Update on Liposuction: What All Plastic Surgeons Should Know. *Plast Reconstr Surg* 2021;147:658e–68e. <https://doi.org/10.1097/PRS.00000000000007419>. [36] Wu S, Coombs DM, Gurnum R. Liposuction: Concepts, safety, and techniques in body-contouring surgery. *Cleve Clin J Med* 2020;87:367–75. <https://doi.org/10.3949/ccjm.87a.19097>. [37] Berry MG, Davies D. Liposuction: A review of principles and techniques. *Journal of Plastic, Reconstructive & Aesthetic Surgery* - JPRAS 2010;64:985–92. <https://doi.org/10.1016/j.bjps.2010.11.018>. [38] Tenna S. Power-Assisted Lipoplasty Versus traditional Suction-Assisted Lipoplasty: Comparative Evaluation and Analysis of Output. *Aesthetic Plastic Surgery* 2005. [39] Zocchi ML. Ultrasonic assisted lipoplasty. Technical refinements and clinical evaluations. *Clin Plast Surg* 1996;23:575–98. [40] de Souza Pinto EB, Abdala PC de SP, Maciel CM, dos Santos F de PT, de Souza RPM. Liposuction and VASER. *Clin Plast Surg* 2006;33:107–15. vii. <https://doi.org/10.1016/j.cps.2005.09.001>. [41] Garcia O, Nathan N. Comparative analysis of blood loss in suction-assisted lipoplasty and third-generation internal ultrasound-assisted lipoplasty. *Aesthet Surg J* 2008;28:430–5. <https://doi.org/10.1016/j.asj.2008.04.002>. [42] Collins PS, Moyer KE. Evidence-Based Practice in Liposuction. *Ann Plast Surg* 2018;80:S403–5. <https://doi.org/10.1097/SAP.0000000000001325>. [43] Beckenstein MS, Grotting JC. Ultrasound-assisted lipectomy using the solid probe: a retrospective review of 100 consecutive cases. *Plast Reconstr Surg* 2000;105:2161–74; discussion 2175–2179. <https://doi.org/10.1097/00006534-200005000-00041>. [44] Apfelberg DB, Rosenthal S, Hunstad JP, Achauer B, Fodor PB. Progress report on multicenter study of laser-assisted liposuction. *Aesthetic Plast Surg* 1994;18:259–64. <https://doi.org/10.1007/BF00449791>. [45] Mordon S, Blanchemaison P. Re: “Histologic evaluation of interstitial lipolysis comparing a 1064, 1320 and 2100 nm laser in an ex vivo model” by Khoury JG, Saluja R, Keel D, Detwiler S, Goldman MP. *Lasers Surg Med* 2008 Jul 22;40(6):402–406. *Lasers Surg Med* 2008;40:519. <https://doi.org/10.1002/lsm.20683>. [46] Blum C, Sasser C, Kaplan J. Complications from Laser-Assisted Liposuction Performed by Noncore Practitioners. *Aesthetic Plastic Surgery* 2013;37. <https://doi.org/10.1007/s00266-013-0153-x>. [47] Paul M, Mulholland RS. A New Approach for Adipose Tissue Treatment and Body Contouring Using Radiofrequency-Assisted Liposuction. *Aesthetic Plast Surg* 2009;33:687–94. <https://doi.org/10.1007/s00266-009-9342-z>. [48] Man D, Meyer H. Water jet-assisted lipoplasty. *Aesthet Surg J* 2007;27:342–6. <https://doi.org/10.1016/j.asj.2007.04.008>. [49] Araco A, Gravante G, Araco F, Delogu D, Cervelli V. Comparison of Power Water – Assisted and Traditional Liposuction: A Prospective Randomized Trial of Postoperative Pain. *Aesth Plast Surg* 2007;31:259–65. <https://doi.org/10.1007/s00266-006-0186-5>. [50] Theodorou S, Chia C. Radiofrequency-assisted Liposuction for Arm Contouring: Technique under Local Anesthesia. *Plast Reconstr Surg Glob Open* 2013;1:e37. <https://doi.org/10.1097/GOX.0b013e3182a58c80>. [51] Paul M, Blugerman G, Kreindel M, Mulholland RS. Three-Dimensional Radiofrequency Tissue Tightening: A Proposed Mechanism and Applications for Body Contouring. *Aesthetic Plast Surg* 2011;35:87–95. <https://doi.org/10.1007/s00266-010-9564-0>. [52] Blugerman G, Schavelzon D, Paul MD. A safety and feasibility study of a novel radiofrequency-assisted liposuction technique. *Plast Reconstr Surg* 2010;125:998–1006. <https://doi.org/10.1097/PRS.0b013e3181ce1820>. [53] Baumgartner A, Hueppe M, Schmeller W. Long-term benefit of liposuction in patients with lipoedema: a follow-up study after an average of 4 and 8 years. *Br J Dermatol* 2016;174:1061–7. <https://doi.org/10.1111/bjd.14289>. [54] Carbalreira Braña A, Poveda Castillo J. The Advanced Care Study: Current Status of Lipedema in Spain, A Descriptive Cross-Sectional Study. *Int J Environ Res Public Health* 2023;20:6647. <https://doi.org/10.3390/ijerph20176647>.

Submitter
Hersant Barbara
barbara.hersant@gmail.com - France

Presenter
Hersant Barbara
barbara.hersant@gmail.com -

#8363

Clinical benefit of the use of autologous platelet rich plasma and hyaluronic acid in breast cancer survivors with Vulvo-vaginal Dryness.

47 - Genital restoration & Functional gynecology

Hersant B

Background/Objectives: Vulvo-vaginal dryness (VVD) is a frequent complaint among postmenopausal and postpartum women. Approximately, 50-70% of breast cancer survivors suffer from one or more VVD symptoms. The common symptoms include dryness and dyspareunia. For breast cancer survivors who cannot benefit from hormonal therapy, autologous platelet rich plasma (PRP) combined to hyaluronic acid (HA) can provide a new alternative therapy for the treatment of vulvovaginal dryness. Indeed, PRP contains the essential of growth factors to activate pluripotent stem cells in the area of injection, resulting in the rejuvenation and even the enhancement of damaged tissue while HA, besides improving hydration of skin tissues, represents a scaffolding material promoting cell differentiation and migration. The aim of this prospective study is to assess the clinical benefit of the association of A-PRP-HA on vulvo-vaginal dryness.

Methods: Twenty breast cancers survivors suffering from vulvo-vaginal dryness with a Gloria Bachmann's Vaginal Health Index (VHI) < 15 were included. Intra-mucosa injections of A-PRP combined with HA (Regenkit®) was performed into two specific sites: vulva and vaginal wall. Clinical evaluations were assessed at 0, 1, 3 and 6 months. Primary endpoint: Evaluation of hydration of vulvo-vaginal mucosa measuring vaginal pH (using vaginal-pH-cotton swabs, EcoCare™ Comfort) and the VHI index. VHI score included five parameters: elasticity, fluid volume, pH, epithelial integrity and moisture. Secondary endpoint: Evaluation of dyspareunia and sexual functional dysfunction using FSD score (Femal Sexual Distress). All adverse events were reported.

Results: All patients (20 patients, mean age: 60.8±5.5 years, BMI: 20.7±5.7) showed improvement in the clinical symptoms: improvement in vaginal itching and dyspareunia. The mean of vaginal pH value (6.4±0.52 before treatment) was significantly improved one month after treatment (5.6±0.57, p<0.0001), 5.17±0.44 at three months after treatment, p<0.0001 and (4.91±0.44, p<0.0001) at 6 months. The vulvo-vaginal dryness index measured by VHI score showed a significant increase in the total score from baseline (before treatment) 10.7±2.12 to 16.2±3.9 (p<0.0001) one month after treatment and 18.35±2.7 (p<0.0001) three months after and 20.75±4.8 (p<0.0001) at 6 months showing an improvement in the hydration, the amount of vaginal secretion and the vaginal epithelial integrity. The score of VHI > to 15 showed a successful of the treatment. Our data showed also a significant improvement in FSD including reduction of level of sexual distress. The score value of FSD showed a significant decrease from baseline (before treatment) 36.35±2.53 before treatment to 33.8±3.3 one month after treatment p<0.01 (with 7% of improvement). At 3 and 6 months after treatment, the FSD score continued to decrease significantly: 30.45±4.53 with an improvement of 16% and 30.15±2.47 with 17% of improvement, p<0.0001 respectively. No adverse events have been reported.

Conclusions: The injection of A-PRP-HA appeared to be an effective and safe method to improve the trophicity and hydration of vaginal mucosa for the treatment VVD in breast cancer survivors with contraindications to hormonal treatments.

Submitter
Suryadi Jessy
jessy_hermawan@yahoo.com - Indonesia

Presenter
Suryadi Jessy
jessy_hermawan@yahoo.com -

#8365

Nefertiti Neck with combination of Polycaprolactone Poly lactic acid Thread, Botox & Mesotherapy by Jessy Suryadi

46 - Threads

Suryadi J

Background/Objectives: Jawline & Neck is one of indicator of aging. Patients may become dissatisfied with the appearance of their neck. The changes of skin quality (excessive skin laxity due to loss of collagen and elastin), excessive submental fat (because of weight gain) or even Loss of Subcutaneous fat (because of weight loss), and muscle tone (prominence of platysmal banding). They are common conditions that are need to be treated. If the patients prefer non surgical method, thread lifting is one of the way to tighten sagging. The procedure involves inserting threads into the soft tissues which are then pulled tight, lifting the skin. Polycaprolactone & Poly lactic acid are absorbable threads which dissolve naturally within 16-18 months, the skin starts to produce more collagen and elastin which gives a longer-lasting result. The ideal patient for a Jawline thread lifting are aged 35 to 55 and have relatively good skin tone with a little sagging . Combination with Botox is needed when the Platysma muscle is quite strong, or there are prominence of platysmal banding. Combination with Hyaluronic acid (HA) is also needed to increase the skin quality. Hyaluronic acid a natural compound of dermal extracellular matrix which has an essential role is skin viscoelasticity, hydration, structure, and firmness. During aging process glycosaminoglycans are reduced, which leads to reduction of elasticity ,collagen density, and resistance of the skin. Injection of cross-linked hyaluronic acid stimulates collagen synthesis and repairs extracellular matrix. And Combination with Mesotherapy is also needed, whenever there is an excessive submental fat or submental skin sagging.

Submitter
Suryadi Jessy
jessy_hermawan@yahoo.com - Indonesia

Presenter
Suryadi Jessy
jessy_hermawan@yahoo.com -

#8366

V Shaped in Asian Type Face Patients By Jessy Suryadi

46 - Threads

Suryadi J

Background/Objectives: V Shape Face is defined as an Oval face with a Sharp chin , that is flanked by a Prominent jawline, supported by very Sharp facial features and filled-up lips. A V Shaped face is consider as Sign of Youth and Femininity. This shape of face makes other facial features (like eyes, nose, and lips) look prominent. Today most of Celebrity& K-pop icons that appear on the screen have the perfect V-shaped face. This shape of face has defined a Hallmark of natural beauty in Asia. The Proportion of V Shape are known as Triangular proportion, where the upperpart of the face is wider than the lower part of the face. But unfortunately these are what we found in our daily practice. Patients comes with Hypertrophy Masseter, or sometimes they comes with excess buccal fat / submental fat, or sometimes they comes with sagging skin, and big mandibula structure. As a doctor, we always analyze our patients problems, and custom plannings based on their problem. And with holistic approach, we will deliver the best result to our patients. For the one with a Square jaw, we can do mandibuloplasty, which will permanently changes the shape of the lower jaw. And the end result we will see smaller jaw shape, a more curved jaw, and a smoother jawline. For the one with Hypertrophied masseter, off course it will affect facial lines, causing discomfort, and creating negative cosmetic impacts. The muscle function disorders will lead to conditions such as trismus, protrusion, and bruxism. Tiny Injection doses of the Botulinum toxin type A, will create temporary local paralysis at the Masseter muscle, leading to V Shape face. For patients who has excess buccal/submental fat, we have few options such as buccal fat removal, liposuction, or lipolysis mesotherapy. For the one who comes with the sagging skin, we also have few options available such as Non Invasive Ultrasound Energy treatment, RF, Fractional CO2, Mesotherapy, Biostimulator / Bio revitalization, and Threadlifting. Last but not least, the Proportion of Face plays crucial roles in V Shape face. As we see most of the celebrity, super model, and movie star around the world has 1 similarity, which is Dominant Median Axis of their face. The median axis of face include forehead, nose, lips and chin. Nowadays we can use Filler, Threadlifting, or Fat transfer as minimal invasive treatments to enhance these facial features. By enhancing these Facial features automatically will create a more Attractive V Shape Face Shape.

Submitter
Jacobs Jordan
jordancjacobs@icloud.com - United States

Presenter
Jacobs Jordan
JordanJacobsNYC@icloud.com - United States

#8372

Is Thread Lifting an Effective Alternative to Plastic Surgery?

46 - Threads

Jacobs J¹

¹Jordan Jacobs Medical Artistry, Nyc, United states

Background/Objectives: Until recently, patients have resorted to surgical procedures such as facelift surgery as the most effective way of addressing issues caused by facial skin laxities such as drooping cheeks and jowls. Although existing skin resurfacing treatments helped restore some degree of firmness on the face, further, some individuals seeking facelifts resorted to injectable compounds. Recently, a new procedure has been developed that has proved instrumental in filling the gap between the noninvasive facial rejuvenation technique and facelift surgeries. This technique is referred to as threadlifting.

Methods: Selection of the appropriate threadlifting product depends on the type of deformity the patient has; whether it is ptosis, tissue atrophy, herniated fat, excess skin laxity or contour irregularities. The preferred method of threadlifting for soft tissue repositioning is using barbed PDO threads delivered into the lower layers of the superficial fat layer, scraping just above the SMAS. First, the practitioner must select an appropriate the entry point of little muscular dynamism in order to create a strong anchor. It is of importance to thoroughly assess the orientation and framework of the targeted structures. Directly insert the cannula perpendicular to the platform of the bone, carefully advancing the head into the lowest point of the superficial fat layer. Once the extent of the bevel length is reached, the cannula should be slowly advanced in the trajectory of the targeted ptosis, with careful attention to depth changes of the superficial fat layer. Once the extent of the cannula is reached, underlying tissue is recruited onto the endpoint of the cannula, to grasp remaining laxity. Once this is complete, the thread can be released from the cannula and secured into the tissue by firmly pressing the thread into the deeper layers of the soft tissue.

Results: The study results revealed the average efficacy of the threadlifting of the jawline and midface. The results of the quantitative study revealed an overall average improvement within the “tragus-to-jowl distance” and the “tragus-to-marionette distance” after the application of the procedure. These results were retrieved during patient follow-up. The average improvement tabulated was 4.24 within the “tragus-to-jowl distance” immediately after the thread implantation. The research deemed this difference as an overall average improvement. Therefore, this revealed that threadlifting procedure has average efficacy, particularly in its application to the jawline.

Conclusions: Over the past decade, threadlifts have been developed with increased strength, safety, and longevity. With the increased use of cosmetic and surgical procedures such as facelifts, there is a need to evaluate the efficacy of the threadlifting approach. Research on quantitative and qualitative sources revealed that various factors determine and prove the efficacy of threadlifting through documented patient satisfaction, provider satisfaction, the longevity of the rejuvenation effect, and noticeable improvements. The results reveal the importance of facilitating evidence-based practice.

References:APTOS. (n.d.). APTOS thread lifting. APTOS. <https://aptos.global/post/37/aptos-thread-lifting> Diaspro, A., Luni, M., & Rossini, G. (2021). Thread lifting of the jawline: A pilot study for quantitative evaluation. *Journal of Cutaneous and Aesthetic Surgery*, 14(1), 47. https://doi.org/10.4103/JCAS.JCAS_41_20

Submitter
Vachatimanont Vanravi
phongphitv@gmail.com - Thailand

Presenter
Vachatimanont Vanravi
Drkwann@gmail.com -

#8375

Asian Facial Contouring: Optical Illusion with Fillers

43 - Anatomy related to non-or minimally invasive approaches

Vachatimanont V

Background/Objectives: Asian facial characteristics such as broad cheekbones and a flatter nose bridge often differs from the ideal oval facial shape. Deformities like midface flatness or weak chin and jawline are common. Filler injections offer a solution by strategically enhancing volume in key areas: lifting cheekbones, defining the nose bridge, projecting the chin, and balancing jaw asymmetry. These interventions create optical illusions, effectively modifying facial deformities while respecting cultural diversity.

Submitter
Yi Kyu-ho
kyuho90@daum.net - South Korea

Presenter
Yi Kyuho
kyuho90@daum.net -

#8380

Anatomical Proposal for Botulinum Toxin for Lower Faces

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Yi K

Background/Objectives: Objectives: The platysma muscle, and depressor anguli oris is a thin superficial muscle that covers the entire neck and lower part of the face. Introduction: he platysma muscle is the primary target muscle for botulinum neurotoxin injection therapy aimed at treating platysmal band and lower facial lifting. Materials / method: In the procedure of botulinum neurotoxin injection therapy, a lack of knowledge of the anatomy of the platysma muscle and the properties of botulinum neurotoxin can lead to side effects such as dysphagia, dysphonia, and weakness of the neck muscles. Results: Anatomically safe injection sites have been proposed for the platysma muscle, and the appropriate injection technique has been reviewed. Conclusion: We proposed optimal injection sites based on the external anatomical features of the mandible. The aim of these proposal was to standardize the procedure for the effective use of botulinum neurotoxin injections by minimizing the dose unit and injection points and thereby preventing adverse events.

Submitter
Bashir Afzaal
dr.afzaal@yahoo.com - Pakistan

Presenter
Afzaal Sunniya
sunniyaafzaal@gmail.com - Pakistan

#8401

Dermogenesis With Mesenchymal Stem Cells: A Fabulous Remedy For Post Acne Depressed Spots

51 - Regenerative aesthetics

Bashir A¹, Afzaal S², Afzaal S³

¹King Edward Medical University, Lahore, Pakistan

²Rahber Medical and Dental College, Lahore, Pakistan

³Shalamar Medical and Dental College, Lahore, Pakistan

Background/Objectives: Post acne depressed spots formed are due to localized fat atrophy and disruption of dermis. Treatment of these acne spots is very hard because of many reasons. At first, difficulty is excision due to their small size and large number. Secondly, subcision followed by filling is not adequately treating the deformity. Despite of multi modalities involved, outcome is not satisfactory. The aim of this study is comparison of long-term effects of conventional fat grafting and ex-vivo expanded Mesenchymal Stem Cells (MSCs) enriched lipofilling for the treatment of post acne depressed spots. After informed consent, forty (40) patients having post acne spots on face were recruited. Patients were explained about the types of treatment offered and placed in two groups depending upon their choice. In lipofilling only group (LF-G), micro fat was harvested and filled intra dermally and sub dermally in the depressed post acne spots. Contrary to this, in MSC enriched lipofilling group (MSC-LF), fat was harvested, MSCs were isolated, cultured to enrich fat before lipofilling intradermally and sub dermally in depressed spots. Patients were kept under follow up and improvement in the contour of depressed spots was noted clinically one year after the single session and was documented with pre and post op pictures. Increase in dermal thickness was confirmed on histological sections of small punch biopsies taken from larger post acne spots pre procedure and one year after the procedure. Evaluation of pre and one year post procedure pictures was also done by two consultant plastic surgeons blinded to the technique applied. Similarly, satisfaction of patients was also registered. Mean age of patients was 26.32(±3.34) and 72% patients were females. Cheeks-only were involved in 57% cases while cheeks associated with involvement of lateral forehead in 29% cases, nose in 11% cases and chin in 3% cases. In MSC-LF group, improvement in dermal thickness was 1.2(±0.6)mm in comparison to LF-G group which was 0.5(±0.3)mm. Patient and physician satisfaction was more in MSC-LF group. Mesenchymal stem cell enriched lipofilling is having pronounced effect in addressing post acne depressed spots by not only having its filling effect but also increasing dermal thickness of facial skin. References: 1. Preneau S, Dreno B. Female acne—a different subtype of teenager acne? *Journal of the European Academy of Dermatology and Venereology*. 2012;26(3):277-82. 2. Tanghetti EA. The role of inflammation in the pathology of acne. *The Journal of clinical and aesthetic dermatology*. 2013;6(9):27. 3. Goodman GJ. Post acne scarring: a review. *Journal of Cosmetic and Laser Therapy*. 2003;5(2):77-95. 4. Mossman J. Preventing and treating acne. *US PHARMACIST*. 2006;31(4):34. 5. Zarei F, Abbaszadeh A. Stem cell and skin rejuvenation. *Journal of Cosmetic and Laser Therapy*. 2018;20(3):193-7. 6. Bashir MM, Sohail M, Bashir A, Khan FA, Jan SN, Imran M, et al. Outcome of conventional adipose tissue grafting for contour deformities of face and role of ex vivo expanded adipose tissue-derived stem cells in treatment of such deformities. *Journal of Craniofacial Surgery*. 2018;29(5):1143-7.

Submitter
Guberti Michael
michael@michaelguberti.com - United States

Presenter
Michael Guberti
michael@michaelguberti.com -

#8405

High Performing Marketing Strategies for the Aesthetics and Anti-Aging Community

73 - Marketing & Practice management

Michael G

Background/Objectives: Speaker background: Michael Guberti writes for the National Institutes of Health and the Plastic and Aesthetic Nursing Journal. He is a marketing professional who has spoken at the International Society of Plastic and Aesthetic Nurses (ISPAN) Conference, the Vegas Cosmetic Surgery Conference, the World Conference on Nursing, Healthcare, and Hospital Management, Microsoft, Gensler and Associates' NYC headquarters, the Society for Marketing Professional Services, and "An Evening with the Media" panel at the Westchester Magazine Headquarters in Rye, NY. He services medical aesthetics practices, doctors, orthodontists, surgeons, nurses, APRNs, and other industries. As he has done for other conferences, Michael will create and provide a pre-recorded, virtual video presentation for you to display to your audience.

Submitter
Sarbazihah Rahi
doctorrahimd@gmail.com - United States

Presenter
Sarbazihah Raheleh
rahi@doctorrahi.com - United States

#8406

Peptides in Aesthetic Medicine

51 - Regenerative aesthetics

Sarbazihah R¹

¹Dr Rahi MD INC, Beverly hills, United states

Background/Objectives: This study, presented by Dr. Rahi, a world-renowned expert in the field, offers a comprehensive overview of the pivotal role of peptides in modern aesthetic practices and integrative medicine. Drawing on extensive experience and expertise, it explores the multifaceted applications of peptides in skincare, anti-aging treatments, weight management, and hair restoration, highlighting their efficacy and transformative potential. Peptides have emerged as key components in skincare formulations, providing significant benefits such as improved skin elasticity, enhanced hydration, and the reduction of inflammation and wrinkles. Scientific research has elucidated their mechanisms of action, demonstrating their ability to stimulate collagen synthesis and enhance skin cell turnover. In weight management, peptide-based medications, particularly GLP-1 receptor agonists, have gained attention for their roles in regulating satiety, slowing gastric motility, managing insulin levels, and promoting fat loss. In the realm of hair restoration, peptides such as GHK-Cu and BPC-157 enhance angiogenesis, improve blood flow to hair follicles, and maintain follicles in the growth phase. Thymosin Beta-4 is noted for its abilities to strengthen hair, increase density, and stimulate normal growth. This study also underscores the principles of integrative medicine, which combines conventional and alternative approaches to provide comprehensive, patient-centered care. It discusses practical methods for incorporating supplements and complementary therapies into medical practices, emphasizing the creation of a healing environment. Examples include the benefits of post-procedure supplements like bromelain, magnesium, omega-3 fatty acids, and specific peptides for skin and body treatments. In conclusion, peptides represent versatile and promising agents in skincare, anti-aging, weight management, and hair restoration. By integrating them into clinical practice, healthcare providers can offer innovative solutions to meet the evolving needs of their patients. The study highlights the importance of continuing education, collaboration with integrative health professionals, and the development of personalized wellness programs.

Methods: Will demonstrate how this peptides are incorporated into my practice

Results: Will show photos of before and after of clients

Conclusions: in conclusion - i will show the use of peptides in regenerative and aesthetic medicine

Submitter
Wen Yanling
516628454@qq.com - China

Presenter
Wen Yanling
Chengbochu216@gmail.com -

#8407

Oriental women refined HTC-anti aging evaluation and management

62 - Anti-aging & integrative medicine

Wen Y

Background/Objectives: The love of beauty is common to all. The silent image conveys appearance, various social information and life status... Phase from the mind, the mind turns with the phase. Aesthetic appearance is the process and way that the human brain perceives appearance. It is based on brain science, psychology and advanced aesthetic design, and it is altruistic to bring about change in all dimensions for others. There is little difference in average head circumference between East and West, but Western people have longer skulls and less prominent cheekbones, so they are more three-dimensional and have smaller faces. Oriental skin lines are relatively smooth, subtle and beautiful. Therefore, different regions and different races should develop a tailored plan to make individual beauty not abrupt and more distinctive.

Methods: With the changes of modern life style and human evolutionary environment, it is difficult to divide treatment methods into age groups, so according to the comprehensive symptoms of each person, from the whole to the local use of unique injection methods and products to achieve therapeutic effects, Here are some of the facial operations

Results: In terms of emotional value, age reduction, small face, lightness, advanced sense, girlish sense, natural traceless, facial flatness of image value, natural smoothness, skin firmness, ligament firmness, fat reduction, fascia enhancement can be achieved Here are some examples

Conclusions: In addition to the face design and treatment, there are also right shoulder, peach buttocks and other operations, through personal customized plans, more than 1,000 customers returned visits, life satisfaction has been greatly improved. Security and efficiency are its advantages

Submitter
Dourthe Olivier
dourt2000@gmail.com - Monaco

Presenter
Dourthe Olivier
dourt2000@gmail.com -

#8408

Is good food the ally or the enemy of healthy food?

62 - Anti-aging & integrative medicine

Dourthe O

Background/Objectives: Do dietetics and gastronomy work in the same direction, is a good dish good for health and vice versa ? What are the points of convergence between a dietitian and a chef, what help a chef can provide to a dietitian and vice versa ?

Methods: meta analysis

Results: For these two professions who have the same goal : to develop the best foods, there is a clear convergence but also points of antagonism explainable historically and technically.

Conclusions: Medicine and gastronomy are complementary in terms of nutrition. Both could advance the current level of expertise in nutrition by exchanging their know how.

References:De Tomas I., Cuadrado C., Beltran B. Culinary nutrition in gastronomics sciences. A review. Int. J. Gastron. Food Sci. 2021, 25, 100406

Submitter
Biswal Anisha
richirichbiswal@gmail.com - India

Presenter
Anisha Biswal
richirichbiswal@gmail.com -

#8409

COMPARISON OF EFFICACY AND SAFETY OF ERBIUM YAG 2940 nm LASER AND FRACTIONAL CO2 LASER IN ATROPHIC ACNE SCAR : A PILOT STUDY

42 - Scars & acne

Anisha B

Background/Objectives: INTRODUCTION Facial acne scar is a common complication of acne vulgaris. Both fractional CO2 laser and erbium YAG laser have been found to be effective. We have undertaken this study as there are limited comparative studies of both the lasers. Objective : To compare the efficacy and safety of 2940 erbium:Yag Laser and fractional CO2 laser for acne scar correction.

Methods: Materials and methods: Patients were randomly divided into two groups (11 each) receiving three sittings of the laser therapy at 4 weeks interval. Inclusion criteria consisted of patients aged 18-40 years with skin type III, IV and V with moderate to severe grade scar. Exclusion criteria consisted of active inflammation or recent oral isotretinoin use. Assessment was done before each treatment and three months after the end of treatment. The response was evaluated using Goodman and Baron acne scar grading system, photographic assessment by a blinded dermatologist and patients own satisfaction score.

Results: Results: The mean of acne severity grade pre treatment was 3.12 ± 0.27 in erbium yag and 3.31 ± 0.42 in fractional CO2 laser which reduced to 2.10 ± 0.71 in erbium yag and 1.93 ± 0.56 in fractional CO2 laser. The photographic assessment reported excellent, marked and moderate improvement in 9, 27 and 54% respectively in the erbium yag group and 18, 36 and 45% in the fractional CO2 group. According to patient satisfaction score majority of patients in fractional CO2 group experienced marked to excellent response while in the erbium yag group majority had moderate to marked response.

Conclusions: Conclusion: Both the fractional CO2 and erbium yag Laser had equal results on mild to moderate scars. Although fractional CO2 laser was more painful and required a longer recovery period it was more efficacious in severe scar. Er:YAG laser has less thermal damage with a faster healing, hence suited for patients with mild to moderate scar and those wanting minimal downtime.

References: • 1. Kyung Eun Jung, Kum Hee Jung, Young Min Park, Jun Young Lee, Tae Yoon Kim, Hyung Ok Kim & Hei Sung Kim (2013) A Split-face comparison of ablative fractional lasers (CO2 and Er:YAG) in Asian patients; postprocedure erythema, pain and patient's satisfaction, Journal of Cosmetic and Laser Therapy, 15:2, 70-73, DOI: 10.3109/14764172.2012.759053 • 2. Karsai S, Czamecka A, Jünger M, Raulin C. Ablative fractional lasers (CO2) and Er:YAG: a randomized controlled double-blind split-face trial of the treatment of peri-orbital rhytides. Lasers Surg Med. 2010; 42: 160 – 167.

Submitter
Dourthe Olivier
dourt2000@gmail.com - Monaco

Presenter
Dourthe Olivier
dourt2000@gmail.com - Monaco

#8410

Exercise as an antiage treatment, how to follow up ?

62 - Anti-aging & integrative medicine

Dourthe O¹

¹wellmedforlife.com, Monaco, Monaco

Background/Objectives: Exercise has an antiage effect. Sedentarity has the opposite effect. How to follow-up exercise as a treatment with metrics and progression of their levels.

Methods: Meta analysis

Results: There are traditional athletic metrics in exercising and we find that there are also new often biological ones that allow to check your antiage treatment efficiency with exercise. Different categories of exercises cause different biological effects that are complementary and can be analyzed and quantified.

Conclusions: Current level of physical activity seems to have an impact on different aging markers.

References:Physical activity should be used as a medication in your

Submitter
Doyle Jenny
Jenny@theclinic holland park.com - United Kingdom

Presenter
Doyle Jennifer
jenny@theclinic holland park.com - United Kingdom

#8412

Implementing a Membership Model at Your Clinic

73 - Marketing & Practice management

Doyle J¹, Scawn R¹

¹The Clinic Holland Park, London, United kingdom

Background/Objectives: In the competitive arena of aesthetics clinics, the integration of membership models is emerging as a powerful strategy: not only to attract new patients but also in retaining existing clients. From a business point of view, studies indicate that it is anywhere between 5-25 times more expensive to acquire a new patient compared to retaining an existing one. By implementing a membership model at your aesthetics clinic, you can help both improve your retention rates and grow your revenue. From a clinical perspective, it works similarly to a gym membership – once patients have committed to a membership plan, they are more likely to follow through with it and achieve better outcomes. And once the practical aspects of implementing a membership model are taken care of, there are benefits from both a clinical and a business point of view. We discuss the practical pathway of implementing such a pathway as well as benefits to clinician, business owner and patient.

Submitter
How Kang Nien
hkangnien@upm.edu.my - Malaysia

Presenter
Kang Nien How
hkangnien@upm.edu.my - Malaysia

#8413

Biostimulators in Aesthetic Medicine: Principles, Options, and Best Practices

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Kang Nien H

Background/Objectives: Aesthetic medicine is an ever-evolving field, with injectables playing a pivotal role in achieving desired outcomes for patients seeking facial rejuvenation and enhancement. However, the nuanced differences between biostimulators, skin boosters, and fillers can be challenging for new practitioners to navigate. While fillers and skin boosters are well-established in the cosmetic domain, biostimulators represent an intriguing frontier with unique principles and a growing array of market options. The primary focus of this talk will be on biostimulators—their underlying mechanisms, benefits, and distinguishing features. Biostimulators stimulate the body's collagen production, offering a natural and gradual improvement in skin texture and elasticity. This presentation will delve into the various types of biostimulators available, including calcium hydroxylapatite, poly-L-lactic acid, and other emerging products. We will explore the science behind, examining how they interact with the skin and underlying tissues to produce long-lasting effects. Additionally, the session will provide practical guidelines on selecting the appropriate biostimulator.

Submitter
Doyle Jenny
Jenny@theclinicollandpark.com - United Kingdom

Presenter
Scawn Richard
richard@theclinicollandpark.com - United Kingdom

#8414

Combining ultrasound with polynucleotide injections to achieve brow lift and periocular rejuvenation

45 - Combination treatments

Scawn R¹, Doyle J¹

¹The Clinic Holland Park, London, United kingdom

Background/Objectives: Whilst surgical brow lift options remain widely used for brow ptosis, for less severe brow ptosis and those looking to avoid invasive procedures non-invasive options have become an attractive option. Within aesthetics, combination therapies are often utilised to give the best result. We present our technique for achieving lifting of the brow utilising a combination of ultrasound based treatment and polynucleotide injections.

Submitter
Doyle Jenny
Jenny@theclinichollandpark.com - United Kingdom

Presenter
Doyle Jennifer
jenny@theclinichollandpark.com - United Kingdom

#8415

Augmenting laser skin resurfacing outcomes by combining procedure protocols with polynucleotide injections

45 - Combination treatments

Doyle J¹, Scawn R¹

¹The Clinic Holland Park, London, United kingdom

Background/Objectives: There have been studies demonstrating accelerated re-epithelisation following fractionated ablative laser treatments when polynucleotides are injected into the same tissue treated. We have expanded on this to utilise polynucleotides across a variety of laser modalities from non-ablative to ablative and fractionated to full field. Polynucleotides are a component predominantly derived from marine DNA. They are innovative biostimulating injectables that stimulate and boost collagen and elastin production, improve tissue firmness and elasticity, have anti-inflammatory properties and promote cellular renewal. Laser skin resurfacing options rely on the controlled thermal injury to targeted tissue, removal of this tissue and replacement with new skin. More ablative technologies aim to achieve skin tightening or a lifting effect by stimulating neocollagenesis.

Submitter
Lueangarun Suparuj
saoraya180@gmail.com - Thailand

Presenter
Lueangarun Suparuj
saoraya180@gmail.com - Thailand

#8418

Enhanced Hair Regrowth Through Laser-Induced Optical Breakdown: A Study of Fractional Picosecond Nd:YAG Laser for Androgenetic Alopecia Treatment

52 - Hair restoration

Lueangarun S¹, Tempark T²

¹Department of Aesthetic Medicine, College of Integrative Medicine, Dhurakij Pundit University, Bangkok, Thailand. **Division of Dermatology, DeMed Clinic Center, Bangkok, Thailand, Bangkok, Thailand

²Department of Pediatrics, Faculty of Medicine, King Chulalongkorn Memorial Hospital, Chulalongkorn University, Pathumwan, Bangkok, Thailand, Bangkok, Thailand

Background/Objectives: Background: Current FDA-approved treatments for androgenetic alopecia (AGA), such as topical minoxidil, oral finasteride, and low-level light therapy, have limitations and can cause side effects. Objective: This study aimed to explore the potential of fractional picosecond laser (FPL) therapy in promoting hair regrowth.

Methods: Methods: In this pilot study, five male participants with mild-to-moderate AGA were treated with a 1064-nm FPL. Each patient received three treatments at four-week intervals, followed by a four-week post-procedure assessment. Hair shafts were evaluated using dermoscopic analysis, and expert panel assessment scores and patient satisfaction were measured using a 7-point scale. Adverse effects were also monitored.

Results: Results: Clinical improvements were observed from 1 to 4 months post-treatment, with significant increases in expert panel assessment scores ($p < 0.001$). Patient satisfaction regarding hair density and thickness also significantly improved at 1 and 4 months ($p = 0.038$ and $p = 0.007$, respectively). Adverse effects were minimal and resolved within a week. Dermoscopic analysis revealed minimal petechiae and no hair shaft damage.

Conclusions: Conclusion: This preliminary study suggests that 1064-nm FPL may effectively promote hair regrowth in male pattern hair loss. Further research is needed to confirm and optimize this promising treatment approach

References: 1. Kim WS, Lee HI, Lee JW, Lim YY, Lee SJ, Kim BJ, et al. "Fractional photothermolysis laser treatment of male pattern hair loss." *Dermatol Surg*. 2011;37(1):41-51. 2. Habbema L, Verhagen R, Van Hal R, Liu Y, Varghese B. "Minimally invasive non-thermal laser technology using laser-induced optical breakdown for skin rejuvenation." *J Biophotonics*. 2012;5(2):194-9. 3. Perper M, Aldahan AS, Fayne RA, Emerson CP, Nouri K. "Efficacy of fractional lasers in treating alopecia: a literature review." *Lasers Med Sci*. 2017;32(8):1919-25. 4. Dai YX, Chuang YY, Chen PY, Chen CC. "Efficacy and Safety of Ablative Resurfacing With A High-Energy 1064 Nd-YAG Picosecond-domain Laser for the Treatment of Facial Acne Scars in Asians." *Lasers Surg Med*. 2020;52(5):389-95. 5. Lim SH, Jung SW, Seo HS, Pi LQ, Hong SP. "Fractional 1064-nm picosecond Nd:YAG laser promotes hair regrowth in BALB/c mice." *J Cosmet Dermatol*. 2022;21(10):5236-7.

Submitter
Lueangarun Suparuj
saoraya180@gmail.com - Thailand

Presenter
Lueangarun Suparuj
saoraya180@gmail.com - Thailand

#8419

Enhancing Acne Scar Treatment with Rose-Derived Stem Cell Exosomes: Synergistic Effects with Picosecond Laser, Fractional RF Microneedle, and Thermomechanical Ablative Devices

42 - Scars & acne

Lueangarun S¹, Tempark T¹

¹Department of Aesthetic Medicine, College of Integrative Medicine, Dhurakij Pundit University, Bangkok, Thailand. **Division of Dermatology, DeMed Clinic Center, Bangkok, Thailand, Bangkok, Thailand

Background/Objectives: Introduction: Acne scars significantly impact the physical and emotional well-being of individuals, posing a persistent challenge in dermatological aesthetics. Recent advancements have explored various treatments, including the innovative use of exosomes derived from rose stem cells (RSCE). This study investigates the combined efficacy of RSCE with fractional picosecond laser (FPL), fractional radiofrequency microneedling (FRM), and fractional thermomechanical ablative (TMA) devices in enhancing acne scar treatment outcomes. Objective: The primary objective was to evaluate the role of RSCE in improving acne scar treatment results when used alongside FPL, FRM, and TMA devices. The study aimed to determine if RSCE application could reduce post-treatment downtime, minimize redness, and enhance overall treatment efficacy.

Methods: Methods: Patients with acne scars underwent three consecutive treatment sessions using either FPL, FRM, or TMA devices, followed by the application of RSCE. Follow-up evaluations were conducted to assess treatment outcomes. The parameters measured included post-treatment downtime, redness, and overall scar reduction efficacy.

Results: Results: The inclusion of RSCE significantly improved the outcomes of acne scar treatments with FPL, FRM, and TMA devices. Notably, patients experienced reduced post-treatment downtime and redness. The enhanced efficacy in scar reduction was also observed, contributing to increased patient satisfaction and improved aesthetic results.

Conclusions: Conclusion: The study supports the beneficial role of RSCE in enhancing acne scar treatment outcomes. When combined with fractional picosecond laser, fractional radiofrequency microneedling, and thermomechanical ablative devices, RSCE not only improves efficacy but also reduces post-treatment downtime. This promising approach holds potential for advancing dermatological aesthetics in the effective treatment of acne scars.

References:1. Kim WS, Lee HI, Lee JW, Lim YY, Lee SJ, Kim BJ, et al. "Fractional photothermolysis laser treatment of male pattern hair loss." *Dermatol Surg*. 2011;37(1):41-51. 2. Dai YX, Chuang YY, Chen PY, Chen CC. "Efficacy and Safety of Ablative Resurfacing With A High-Energy 1064 Nd-YAG Picosecond-domain Laser for the Treatment of Facial Acne Scars in Asians." *Lasers Surg Med*. 2020;52(5):389-95. 3. Chen B, Li Q, Zhao B, Wang Y. "Stem cell-derived exosomes: Mechanisms of action and clinical applications in dermatology and cutaneous medicine." *Exp Dermatol*. 2019;28(9):991-1000. 4. Habbema L, Verhagen R, Van Hal R, Liu Y, Varghese B. "Minimally invasive non-thermal laser technology using laser-induced optical breakdown for skin rejuvenation." *J Biophotonics*. 2012;5(2):194-9. 5. Xu X, Liang Y, Li X, Xu X. "Therapeutic Potential of Stem Cell-Derived Extracellular Vesicles in Regenerative Medicine." *Stem Cells Int*. 2020;2020:8820954.

Submitter
Lueangarun Suparuj
saoraya180@gmail.com - Thailand

Presenter
Lueangarun Suparuj
saoraya180@gmail.com - Thailand

#8420

The Efficacy of Combining Rose Stem Cell-Derived Exosomes (RSCEs) with Fractional Picosecond Laser for Male Androgenetic Alopecia (AGA) Treatment: A Pilot Study

51 - Regenerative aesthetics

Lueangarun S¹, Tempark T²

¹Department of Aesthetic Medicine, College of Integrative Medicine, Dhurakij Pundit University, Bangkok, Thailand. **Division of Dermatology, DeMed Clinic Center, Bangkok, Thailand, Bangkok, Thailand

²Department of Pediatrics, Faculty of Medicine, King Chulalongkorn Memorial Hospital, Chulalongkorn University, Pathumwan, Bangkok, Thailand, Bangkok, Thailand

Background/Objectives: Background: Research has emphasized the crucial role of exosomes in hair growth and regeneration, suggesting a promising pathway for alopecia treatments. Additionally, the innovative 1064-nm fractional picosecond laser (FPL) technology has demonstrated effectiveness in stimulating hair growth without damaging existing hair shafts. Objective: This study aimed to evaluate the effectiveness of combining rose stem cell-derived exosomes (RSCEs) with the fractional picosecond laser (FPL) technique in treating androgenetic alopecia (AGA).

Methods: Methods: In this preliminary study, 10 male participants with mild-to-moderate AGA received treatment using a 1064-nm FPL, followed by topical application of RSCEs. The participants underwent five sessions at four-week intervals, with a follow-up assessment four weeks after the final treatment. Outcomes were measured using expert panel assessment scores and patient satisfaction on a seven-point scale, alongside dermoscopic analysis to evaluate hair shafts and monitor side effects.

Results: Results: Clinical improvements were observed from the first to the sixth month post-treatment, with a significant increase in expert panel assessment scores. Patients noted substantial improvements in hair density and thickness starting from the first month. Side effects were minimal and temporary. Dermoscopic examinations showed minimal petechiae without damage to the hair shafts.

Conclusions: Conclusion: This study suggests that the combination of 1064-nm FPL and topical application of rose stem cell-derived exosomes may enhance hair regrowth in male pattern hair loss. However, further studies are needed to optimize and validate this promising treatment approach.

References: 1. Kim WS, Lee HI, Lee JW, Lim YY, Lee SJ, Kim BJ, et al. "Fractional photothermolysis laser treatment of male pattern hair loss." *Dermatol Surg*. 2011;37(1):41-51. 2. Chen B, Li Q, Zhao B, Wang Y. "Stem cell-derived exosomes: Mechanisms of action and clinical applications in dermatology and cutaneous medicine." *Exp Dermatol*. 2019;28(9):991-1000. 3. Dai YX, Chuang YY, Chen PY, Chen CC. "Efficacy and Safety of Ablative Resurfacing With A High-Energy 1064 Nd-YAG Picosecond-domain Laser for the Treatment of Facial Acne Scars in Asians." *Lasers Surg Med*. 2020;52(5):389-95. 4. Habbema L, Verhagen R, Van Hal R, Liu Y, Varghese B. "Minimally invasive non-thermal laser technology using laser-induced optical breakdown for skin rejuvenation." *J Biophotonics*. 2012;5(2):194-9. 5. Xu X, Liang Y, Li X, Xu X. "Therapeutic Potential of Stem Cell-Derived Extracellular Vesicles in Regenerative Medicine." *Stem Cells Int*. 2020;2020:8820954.

Submitter
Lueangarun Suparuj
saoraya180@gmail.com - Thailand

Presenter
Lueangarun Suparuj
saoraya180@gmail.com - Thailand

#8421

Treatment of Papular Acne Scars with a Combination of Fractional Picosecond Laser, Focused Ablative Carbon Dioxide Laser, Fractional Radiofrequency Microneedle, and Exosomes with Dermoscopic Evaluation

42 - Scars & acne

Lueangarun S¹, Tempark T²

¹Department of Aesthetic Medicine, College of Integrative Medicine, Dhurakij Pundit University, Bangkok, Thailand. **Division of Dermatology, DeMed Clinic Center, Bangkok, Thailand, Bangkok, Thailand

²Department of Pediatrics, Faculty of Medicine, King Chulalongkorn Memorial Hospital, Chulalongkorn University, Pathumwan, Bangkok, Thailand, Bangkok, Thailand

Background/Objectives: Background: Papular acne scars, characterized by skin-colored, minimally elevated, anetoderma-like, soft, and compressible lesions, often appear on the nose, chin, and upper back. These lesions are notoriously difficult to treat with conventional resurfacing techniques. Objectives: This study aims to evaluate the efficacy of dermoscopic evaluation and combination treatment using a fractional picosecond laser, focused ultra-pulse carbon dioxide (CO₂) laser, fractional radiofrequency (RF) microneedle (FRM), and exosomes for the treatment of papular acne scars.

Methods: Materials & Methods: Dermoscopic examination was performed to evaluate fibrosis, telangiectatic vessels, redness, and other structural aspects of the scars. The treatment procedure involved the application of topical anesthesia followed by an ultra-pulse ablative CO₂ laser and a fractional 1064-nm picosecond laser using microlens arrays (MLA). Subsequently, exosomes were administered topically. Patients were advised to practice strict sun protection and apply topical antibiotics for seven days post-procedure. In cases unresponsive to combination laser treatment, FRM was employed. The treatment protocol consisted of 2 to 4 sessions spaced 4-6 weeks apart. The efficacy of the treatment was evaluated based on a reduction in the total number of scars and improvements according to the Investigator Global Assessment (IGA).

Results: Results: The treatment resulted in a 60-75% reduction in the total number of scars, with improvements of 60-80% on the IGA scale. Mild and transient post-inflammatory hyperpigmentation was observed in one patient. Cases that did not respond to laser treatment showed a 60-80% improvement with FRM treatment.

Conclusions: Conclusion: The combined use of dermoscopic evaluation and treatment modalities—namely fractional picosecond laser, focused ultra-pulse carbon dioxide laser, fractional radiofrequency microneedle, and exosomes—has proven effective in the management of papular acne scars. This pilot study demonstrates significant reductions in scar counts and notable improvements in scar appearance as measured by the Investigator Global Assessment scale. While most patients experienced positive outcomes with minimal side effects, the adaptability of adding fractional radiofrequency microneedle treatment for non-responsive cases further enhances the versatility and effectiveness of our approach. This suggests that a tailored, multi-technology treatment strategy may be necessary to optimize outcomes for challenging dermatological conditions such as papular acne scars. Future studies with larger sample sizes and longer follow-up periods are needed to validate these findings and refine treatment protocols.

References: 1. Kim WS, Lee HI, Lee JW, Lim YY, Lee SJ, Kim BJ, et al. "Fractional photothermolysis laser treatment of male pattern hair loss." *Dermatol Surg.* 2011;37(1):41-51. 2. Dai YX, Chuang YY, Chen PY, Chen CC. "Efficacy and Safety of Ablative Resurfacing With A High-Energy 1064 Nd-YAG Picosecond-domain Laser for the Treatment of Facial Acne Scars in Asians." *Lasers Surg Med.* 2020;52(5):389-95. 3. Habbema L, Verhagen R, Van Hal R, Liu Y, Varghese B. "Minimally invasive non-thermal laser technology using laser-induced optical breakdown for skin rejuvenation." *J Biophotonics.* 2012;5(2):194-9. 4. Chen B, Li Q, Zhao B, Wang Y. "Stem cell-derived exosomes: Mechanisms of action and clinical applications in dermatology and cutaneous medicine." *Exp Dermatol.* 2019;28(9):991-1000. 5. Xu X, Liang Y, Li X, Xu X. "Therapeutic Potential of Stem Cell-Derived Extracellular Vesicles in Regenerative Medicine." *Stem Cells Int.* 2020;2020:8820954.

Submitter
Doyle Jenny
Jenny@theclinic holland park.com - United Kingdom

Presenter
Scawn Richard
richard@theclinic holland park.com - United Kingdom

#8422

Treating unresectable periocular Xanthelasma using a combination of minimally invasive surgery and Erbium:YAG laser.

45 - Combination treatments

Doyle J¹, Scawn R¹

¹The Clinic Holland Park, London, United kingdom

Background/Objectives: Xanthelasma are benign yellow to orange lesions affecting the eyelids and surrounding tissue. Surgical excision can be carried out but some cases may present with affected areas that are unresectable. We present a case and describe our technique where we combined minimally invasive surgery with Er: YAG laser in order to achieve full resection of the lesions.

Submitter
Dziabas Daniel
dziabas@hotmail.com - Brazil

Presenter
Dziabas Daniel
daniel@danieldziabas.com.br - Brazil

#8423

Lipolifting: Definition and Non-Surgical Facial and Body Lifting with Subcutaneous 1210nm Laser

49 - Lasers, EBDs & Light

Dziabas D

Background/Objectives: Demonstrate a technique for defining and lifting facial and body contours using a 1210nm non-ablative subcutaneous laser, with high coefficient absorption by fat, minimally invasive, safe, highly effective and fast recovery.

Methods: This innovative technique uses a 1210nm non-ablative subcutaneous laser, with an optical fiber coupled to a microcannula. It is indicated for patients with mild to moderate sagging, ptosis and/or fat accumulation, loss of contour and facial and body definition. The technique consists of a single session in which the area to be treated is delimited and, through retroapplication vectors, continuous and uniform shots are made. Treatment is personalized according to the patient's anatomy and individual goals.

Results: The effectiveness of the technique has been validated in more than 60 patients. Patients rated the aesthetic result as “much improved” and no adverse events were observed during follow-up. Patients were evaluated for a period of 90 days, in addition to the GAIS scale, documentation and recording were carried out using software that scans and performs a digital assessment of the patient, ensuring quality 3D images for accurate assessments.

Conclusions: This 1210 nm subcutaneous laser treatment technique has demonstrated positive and safe results in more than 60 patients. Patient satisfaction, with “much better” reviews, highlights the feasibility of this minimally invasive approach to improving facial definition, treating localized fat, mild and moderate sagging, facial lifting effect and body remodeling. By providing immediate results and minimal adverse events, this technique appears as a safe and effective alternative to the use of a 1210nm selective subcutaneous laser.

Submitter
Dziabas Daniel
dziabas@hotmail.com - Brazil

Presenter
Dziabas Daniel
daniel@danieldziabas.com.br - Brazil

#8424

Microdosis of Hybrid HA Complexes: New approach for frontal, glabellar and periorbital rhytids

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Dziabas D¹

¹Daniel Dziabas Dermatology , São paulo , Brazil

Background/Objectives: To demonstrate the safety and efficacy of an innovative technique utilizing microdoses of hybrid cooperative complexes of high and low molecular weight hyaluronans for the treatment of frontal, glabellar and periorbital rhytids, without the use of botulinum toxin for muscles.

Methods: The technique consists of the use of microdoses of a hybrid high and low molecular weight hyaluronic acid complex that contains 32 mg of low molecular weight hyaluronic acid (HA) (80-100 Kda) and 32 mg of high molecular weight HA (1100-1400 Kda), and high concentration (64mg / 2ml) and free from BDDE cross-linking. A blanching technique was used, inserting the needle as tangentially as possible into the skin (at an angle of approximately 10 degrees), in an intradermal plane, avoiding vascular accidents in dangerous areas, as frontal, glabella and periorbital.

Results: The effectiveness of the technique was validated in more than 40 patients. The patient assessed the aesthetic outcome as 'very much improved,' and no adverse events were observed during the follow-up. The result achieved was quite significant, improving the general aesthetic appearance of the periorbital, frontal and glabellar region, providing a more youthful appearance for the patient, with an improvement in the formation of static and dynamic wrinkles through myomodulation, in addition to improving the quality and texture of the skin through tissue bioremodeling.

Conclusions: This innovative upper third face enhancement technique using microdoses of hybrid cooperative complexes of high and low molecular weight HA for the treatment of frontal, glabellar and periorbital rhytids has demonstrated positive and safe results in more than 40 patients. Patient satisfaction, with assessments of "very much improved," highlights the feasibility of this minimally invasive approach to enhance dynamic / static wrinkles and sagging. By providing fast results and minimal adverse events, this technique emerges as an appealing alternative to treat the aging process of the upper third in a safe and effective way.

Submitter
Titovets George
aptos.london@gmail.com - United Kingdom

Presenter
Titovets George
aptos.cyprus@gmail.com -

#8427

Combined Soft Perineo- Vaginoplasty – how to achieve best result.

47 - Genital restoration & Functional gynecology

Titovets G

Background/Objectives: Introduction. Single Thread Vagino- Perineoplasty is usually used in Aesthetic Gynecology [1]. The idea of simultaneous approaches in Soft Perineoplasty combined with volumetric correction of the Labia Majora came up for three reasons [2]: 1) Often indications for perineoplasty occur in women after the age of 40 - this is directly related to a sharp drop in estrogen levels, which entails a dramatic loss of collagen and elastin in the connective tissues. 2) Loss of collagen and elastin in connective tissues entails, among other things: fat loss and sagging skin in the labia majora; wrinkles and fine lines on the skin of the labia majora; relaxation of the vagina vestibule; gaping genital slit. 3) Each of our Patients wants to receive: a comprehensive solution to her problems; maximum treatment result; minimum visits to the clinic; faster recovery time. Simultaneous approaches in soft perineoplasty combined with a volumetric correction of the Labia Majora I called Combined Soft Perineoplasty (CSP) and published as co-author of Guidelines in 2019 [3].

Methods: CSP procedure includes 3 stages: 1) Reinforcement of the outer wall of Labia Majora; 2) Soft Perineo- Vaginoplasty; 3) Volumetric Correction of the Labia Majora. These steps are performed sequentially, in one session, over a time span of 45-60 minutes. The presentation is illustrated with practical video stages of procedures and photos before and after.

Results: During the last 7 years: 132 procedures were performed. Age of patients 38 - 62 years old, Satisfaction – 100% There were no complications.

Conclusions: Minimally Invasive Thread Methods like a Soft Surgery demonstrate great possibilities of their application in the practice of aesthetic gynecology. Soft Surgery have every right to be widely used in the Aesthetic Gynecology. However soft surgery in the intimate area is recommended to be performed by a qualified gynecologist with experience in conducting vaginal operations. At least perfect knowledge of the clinical and applied anatomy of the female genitals is essential. Therefore, minimally invasive aesthetic gynecology needs proper promotion among patients and training of specialists.

References: We have at least 11 references.

Submitter
Titovets George
aptos.london@gmail.com - United Kingdom

Presenter
Titovets George
aptos.cyprus@gmail.com -

#8428

Spring Urethra Fixation for the Stress Urinary Incontinence Treatment.

47 - Genital restoration & Functional gynecology

Titovets G

Background/Objectives: According to world statistics, about 40% of women after the age of 40 suffer from stress urinary incontinence [1], which deserves the attention of aesthetic gynecology [2]. The method of Spring Urethra Fixation (SUF) for the treatment of Stress Urinary Incontinence (SUI) was presented by me for the first time at the International Congress of Plastic Surgery and Aesthetic Medicine KOLKHIDA 2022, Tbilisi, Georgia [3]. What are the main advantages of the proposed method: 1) blocking the hypermobility of the urethra as the main pathogenetic factor of urine leakage; 2) stimulation of collagen synthesis and elastic in the coupling tissue of the periurethral space as one of the etiological reasons for urinary incontinence; 3) increase in microcirculation in the area of urethra and bladder sphincters, which leads to improving the functional capacity further.

Methods: The method includes installation of four spirals (Springs) made of P(LA/CL) threads located on the same distance from each other, on the periurethral space at a length of 25-30 mm. The presentation is illustrated with practical video stages of procedures and photos before and after.

Results: During the last 4 years: 37 procedures were performed. Age of patients: 36 - 57 years old, Elimination of urine leakage – 100% There were no complications.

Conclusions: Minimally Invasive Thread Methods like a Soft Surgery demonstrate great possibilities of their application in the practice of aesthetic gynecology. Soft Surgery have every right to be widely used in the Aesthetic Gynecology. However soft surgery in the intimate area is recommended to be performed by a qualified gynecologist with experience in conducting vaginal operations. At least perfect knowledge of the clinical and applied anatomy of the female genitals is essential. Therefore, minimally invasive aesthetic gynecology needs proper promotion among patients and training of specialists.

References:WE have at least 7 references

Submitter
Titovets George
aptos.london@gmail.com - United Kingdom

Presenter
Titovets George
aptos.cyprus@gmail.com -

#8429

“Pour Hommes” - minimally invasive male face’s reshaping and lifting

46 - Threads

Titovets G

Background/Objectives: In recent years, there has been a trend in aesthetic medicine of a sharp increase in men seeking face lifting and reshaping. The main requests of men are: 1) removing wrinkles on the forehead to smooth the skin 2) lifting of eyebrows and upper eyelids 3) volumetric correction and accent of a cheek area 4) elimination of nasolabial fold 5) jawline lifting 6) marionette line fixation 7) chin elongation and enforcement. These types of aesthetic treatments are easily performed using: 1) Thread Lifting Methods 2) HA Fillers 3) Neocollagenesis Stimulators 4) BTA 5) Micro Fat Dermagraft. In the practice of aesthetic medicine, there are many methods for eliminating the nasolabial fold.

Methods: The method proposed by us and tested on a large number of patients over the past 5 years includes 3 stages: - cutting of subcutaneous adhesions in the area of the nasolabial fold - replenishment of the volume of the fold with special spiral threads - lifting and volumetric correction of the cheek area. To achieve this effect, we use P(LA/CL) barbed and spirally wrapped threads and a special twisted metal wire medical devices: twisted metal wire 2/0 or 3/0 on depends of the skin condition spirally wrapped threads 7 cm long, barbed threads 50 cm long for each side.

Results: Our method makes it possible to achieve: - strong visible result immediately after the procedure - short recovery period - long lasting result. The presentation is illustrated with practical video stages of procedures and photos before and after.

Conclusions: Our proposed method has many advantages: - performed under local anesthesia - the duration of the procedure is 20-30 minutes - visible result immediately after the procedure - short recovery period - skin rejuvenation due to neocollagenesis - painless - safe - no side effects - no complications - long-term result up to 3 years.

Submitter
Titovets George
aptos.london@gmail.com - United Kingdom

Presenter
Titovets George
aptos.cyprus@gmail.com -

#8430

Minimally invasive Reshaping and Lifting of Mid- and Lower Face – a different approaches depending of facial Morphotype and Age-related changes

46 - Threads

Titovets G

Background/Objectives: Ptosis and deformities of the middle and lower face are of great importance in the practice of aesthetic medicine as a 100% age-related change in men and women of any facial morphotypes. Perhaps this is one of the first age-related changes, which is an integral reason for a visit to a specialist in aesthetic medicine. Of course, one of the main places in the aesthetic correction of these age-related changes is occupied by P(LA/CL) Threads Lifting Methods which provide at least a triple effect: - reinforcement - lifting - skin rejuvenation.

Methods: Based on our experience, we offer: - an algorithm for selecting threads from a wide range of PLLA/CL products and - rules for choosing anchor points and - optimal patterns for the installation of various threads on depends of facial morph type and age related changes. This is possible, taking into account the analysis we have proposed. - facial morphotypes and - the degree of age-related changes.

Results: The technique we offer has been used by us for more than 3 years and shows high efficiency and excellent patient reviews. The presentation is illustrated with practical video stages of procedures and photos before and after.

Conclusions: Our proposed method has many advantages: - performed under local anesthesia - the duration of the procedure is 20-30 minutes - visible result immediately after the procedure - short recovery period - skin rejuvenation due to neocollagenesis - painless - safe - no side effects - no complications - long-term result up to 3 years Therefore this safe and innovative minimally invasive method can be recommended for wide use on the Aesthetic Medicine.

References: We have at least 7 references.

Submitter
Titovets George
aptos.london@gmail.com - United Kingdom

Presenter
Titovets George
aptos.cyprus@gmail.com -

#8431

Minimally invasive Body Reshaping using Threads.

50 - Body contouring & skin tightening

Titovets G

Background/Objectives: Body contouring (shaping) after weight loss involves removing the excess skin and tightening the surrounding tissues. Typically, the surgeon makes an incision on the targeted area, removing fat either directly or with the help of liposuction. Underlying supportive tissues are then tightened using sutures to achieve a result. However, surgical methods: 1) do not always have indications for use, 2) do not lead to an overall improvement in the skin, 3) always have a long recovery time, 4) the cost of surgery for patients is always more expensive. Therefore, we offer minimally invasive methods using PLLA/CL threads. It is important to ensure skin rejuvenation, increase its firmness, elasticity, turgor.

Methods: We use threads for minimally invasive correction. Common areas of application for these body shaping threads: 1) the inner surface of the shoulder, 2) inner thighs, 3) the anterior wall of the abdomen. The thread technique provides: 1) selection of anchor points for fixing 2) marking 3) installation of threads in accordance with the rules 4) following the recommendations after the procedure.

Results: After the procedures, a follow-up examination is carried out after 1 month. As a result, in all cases it is observed: 1) pronounced smoothing of the skin, 2) complete elimination of small lines, 3) significant smoothing of large wrinkles until their elimination 4) thickening of the skin itself, 5) firming 6) increased skin turgor 7) visually noticeable skin brightening It is very important to note that we notice a significant result after 3 months from the procedure to 3-5 years after.

Conclusions: Minimally invasive body contouring using threads provides: 1) reinforcement, 2) soft lifting, 3) skin rejuvenation due to neocollagenesis. This leads to smoothing and tightening of the skin, reshaping the body.

Submitter
Titovets George
aptos.london@gmail.com - United Kingdom

Presenter
Titovets George
aptos.cyprus@gmail.com -

#8432

Hello “Almond Eyes”! “Fox Eye” - Goodbye! New method of the Eyes Reshaping.

46 - Threads

Titovets G

Background/Objectives: The eyes and the periorbital area in general are an important part of the appearance of the face and the overall image in particular. One of the frequent aesthetic problems of this area are: 1) fallen and low-setting eyebrows, 2) sagging and excess skin of the upper eyelid, 3) down position outer corner of the eye. All these changes create a look: 1) fatigue, 2) sadness, 3) more age. The purpose of aesthetic correction of the eyes and periorbital area is as follows: provide lifting of the soft tissues of the periorbital area in such a way as to provide a visual effect of a fresh look. One of the minimally invasive methods used since about 2015 is the thread lift, in which the procedure was carried out: Lifting the lateral part of the upper eyelid due the straightening and lifting of the distal section and the tip of the eyebrow. This method was called "fox eyes" or "cat eyes". However, as result of the procedure, the acute angle is formed between the eyebrow line and the long eye line. This “angle of aggression” creates the “predatory” facial expression and a guarded look. Therefore, our aim was to create a fundamentally new method for reshaping of the eye and periorbital area. We set a goal to create a new, aesthetically pleasing eyebrow lifting.

Methods: We have developed a new method of eyebrow lifting, which makes it possible to create: the peaceful facial expression with the bewitching and attention grabbing look. The main difference of our method is that we raise: - lateral canthal angle of the eye - upper eyelid - middle and lateral part of the eyebrow, forming parallel lines (we call them – «lines of nobility») of the eyebrow and intercanthal line of the eye - which is fundamental to the Middle Eastern Style of eye shape. The proposed method is based on the thread technologies of soft tissue lifting. It uses absorbable barbed P(LA/CA) threads. We named this eyes and eyebrows thread lifting - “almond eyes”. This procedure is performed: 1) in the treatment room; 2) by local anesthesia; 3) within 1.5 - 2 hours.

Results: 1) We have carried out procedures and tested the duration of the lifting effect on many patients. 2) The age of our patients ranged from 22 to 68 years. 3) Any adverse reaction, side effects, complications didn't register. 4) According to our clinical cases, a significant effect lasts 2 - 2.5 years (we started using this approach 2.5 years ago).

Conclusions: Significant and long lasting result gives us the opportunity to: 1) use this method in clinical practice; 2) to report about this method at the Congresses of Aesthetic Medicine; 3) to teach this method to doctors working with thread lifting technologies in aesthetic medicine.

Submitter
Boiko Mykola
profboiko@gmail.com - Ukraine

Presenter
Boiko Mykola
profboiko@gmail.com -

#8435

Penis enlargement. Why, to whom and how?

47 - Genital restoration & Functional gynecology

Boiko M

Background/Objectives: The primary aim of intimate male correction is to improve the genital aesthetic. In the last years, the terms "Small penis anxiety" and "Penile dysmorphism" has been used in sexology to refer to a man's excessive concern about the size and/or shape of his completely-normal penis. For men suffering from psychological dysmorphic disorder, the size of their flaccid penis is much more important than the size of the erect penis. The correction methods can be split into invasive and non-invasive, including aesthetic devices. The psychological method involves convincing the patient to be happy with the size and shape of their penis as it is, instead of making it bigger. The stretching method involves using special devices such as the penis extender or penis pump. Intimate masculine surgery includes various modern, invasive techniques. More popular for lengthening penis is ligamentolysis with plastic of pubis skin. We have worked out even the own original "Cross" method of lengthening. To increase the penis girth, we use not only surgical techniques but also injection techniques. Although surgical methods have a positive effect, they give a certain percentage of complications. That's why we focused on injection. In recent years, the introduction of fillers for the glans and shaft of the penis has become more popular. Injectable fat, poly-L-lactic acid (PLLA) and hyaluronic acid (HA) has been used for soft tissue augmentation for more than a decade in the world. We used HA for penis girth enlargement in 132 patients who suffer from "Small penis anxiety". The method consists in injecting hyaluronic acid interfascially into the shaft of the penis and into the superficial layer of the glans. The total volume used for 1 patient was 14 ml. The effectiveness was also evaluated with the Self-Esteem And Relationship (SEAR) questionnaire before and 3 months after the procedure. Baseline mean penile girth was 9.5 ± 0.77 cm for the shaft and 9.7 ± 1.01 for the glans, 3 month after the injection – 11.2 ± 0.84 cm and 11.2 ± 1.04 cm respectively. Mean girth increase was 1.7 ± 0.13 cm and 1.5 ± 0.10 . The complications after the procedure we observed in 4 patients: nodal formations and irregular filler distribution. Regarding the SEAR questionnaire, the satisfaction of sexual life and self-esteem improved significantly compared with the results before procedure by 8.6 ± 0.46 ($P < 0.001$) points from 70.2 ± 12.51 till 84.23 ± 11.49 . We achieved not only penile thickening, but also increasing self-confidence, the frequency of sexual activity and sexual satisfaction..

Submitter
Scherz Gunther
gunther@cutislaserclinics.com - Singapore

Presenter
Gunther Scherz
gunther@cutislaserclinics.com -

#8436

Patient-Centric Growth Strategies: The Cornerstone of Success in Medical Aesthetic Clinics

73 - Marketing & Practice management

Gunther S

Background/Objectives: The medical aesthetics industry is a rapidly growing and highly competitive market, driven by increasing consumer demand for non-invasive and minimally invasive cosmetic procedures. However, the success of clinics in this field hinges not only on clinical expertise but also on building and maintaining strong patient relationships. This presentation delves into the critical role of patient-centric strategies in driving sustainable growth for medical aesthetic clinics.

Methods: The presentation will utilize a multi-faceted approach to explore the impact of patient-centricity: **Case Studies:** Real-world examples from Cutis Medical Laser Clinics will be presented, showcasing the successful implementation of patient-centric strategies. These cases will highlight measurable outcomes such as increased patient retention rates, improved referral patterns, enhanced patient satisfaction scores, and overall clinic growth. **Data Analysis:** Rigorous analysis of patient feedback surveys, online reviews, and treatment outcome data will be conducted. This quantitative approach will identify key drivers of patient satisfaction, uncover areas for improvement, and measure the return on investment (ROI) of patient-centric initiatives. **Literature Review:** A comprehensive review of relevant research in the fields of patient relationship management, service quality, and consumer behavior will provide a theoretical foundation for the presentation's findings. This will include peer-reviewed articles from journals such as the Aesthetic Surgery Journal, Dermatologic Surgery, and Journal of Cosmetic Dermatology.

Results: The presentation will demonstrate the multifaceted benefits of a patient-centric approach: **Increased Patient Loyalty:** By tailoring treatments to individual needs, proactively communicating with patients, and providing exceptional service throughout the patient journey, clinics can foster loyalty and encourage repeat visits. **Amplified Referrals:** Satisfied patients are more likely to recommend a clinic to their friends and family. Implementing referral programs and actively encouraging patients to share their positive experiences can significantly boost organic growth. **Improved Patient Management:** Streamlining processes, optimizing resource allocation, and utilizing technology to enhance communication and appointment scheduling can lead to greater efficiency, reduced wait times, and a more seamless patient experience. **Enhanced Brand Reputation:** Positive word-of-mouth, online reviews, and social media engagement contribute to a strong brand reputation, attracting new patients and building trust in the community. **Sustainable Business Success:** The cumulative effect of these factors is increased revenue, profitability, and a competitive advantage in the market.

Conclusions: Patient-centricity is not merely a buzzword but a fundamental principle that should be ingrained in the culture and operations of medical aesthetic clinics. By prioritizing patient needs, preferences, and experiences, clinics can foster loyalty, encourage referrals, and achieve long-term success.

References: American Society for Dermatologic Surgery (ASDS). (2023). Consumer Survey on Cosmetic Dermatologic Procedures. Sitzia, T., & Woodruffe, H. (2016). Patient satisfaction with cosmetic procedures: A systematic review. Aesthetic Surgery Journal, 36(10), 1146-1156. Garg, V., & Kumar, A. (2022). The impact of service quality on customer loyalty in the medical tourism industry: A systematic review and meta-analysis. Journal of Medical Marketing, 22(4), 315-330. Additional References: Ascher, B. (2018). The New Rules of Marketing and PR. Wiley. Kotler, P., & Keller, K. L. (2015). Marketing Management. Pearson. By embracing a patient-centric approach, medical aesthetic clinics can not only survive but thrive in this dynamic and competitive landscape. The strategies and insights presented in this presentation will empower practitioners to build lasting relationships with their patients, foster loyalty, and achieve sustainable business success.

Submitter
Ghoreishi Mohsen
mohsen@kohaninc.com - United States

Presenter
Ghoreishi Mohsen
mohsen@kohaninc.com - United States

#8437

Blueprint for Success

73 - Marketing & Practice management

Ghoreishi M¹

¹KOHAN architecture, San francisco, United states

Background/Objectives: Integrating Clinical skills and Physical office design to improve operations, patient and team experience to enhance financial stability and Growth. There are many blueprints drawn for each aesthetic medicine, but there is only one principle to follow creating the best practices in Aesthetic building design and construction. The roadmap to this principle will be presented based on employment of certain steps to achieve your dream, aesthetic practice such as: Analyzing your physical environment, Limitations and possibilities Risks and benefits Production and Revenue Patient experience.

Submitter
Ghoreishi Mohsen
mohsen@kohaninc.com - United States

Presenter
Ghoreishi Mohsen
mohsen@kohaninc.com -

#8438

Four Key Points to Design and Building Your Practice

73 - Marketing & Practice management

Ghoreishi M

Background/Objectives: The purpose of this session is to Identify the Four Steps Required in Building aesthetic Practice by Evaluating the Hierarchy of Parts and Functions Combined with Clinical Abilities, Practice Management Tools, and Integrating the Design of Physical Office Environments Distinguishing the Practice Among the Best in the Business. In this session, participants will be able to recognize: 1- How to realize your Vision 2- How to know what a realistic Budget is. 3- what is your Timeline and its impact on practice revenue 4- Team Assembly (the team members who will make this happen) The very four ingredients everyone needs to know to realize a successful outcome.

Submitter
Quinones Oro Ricardo
ricky.quinones.md@gmail.com - Philippines

Presenter
Quiñones Oro Ricardo
RICKY.QUINONES.MD@GMAIL.COM -

#8439

Exploring the Latest Trend in Non-Surgical Dimpleplasty

46 - Threads

Quiñones O

Background/Objectives: THIS PRESENTATION EXPLORE THE POSSIBILITY OF DIMPLE CREATION USING A COG THREAD TO CREATE FACIAL INDENTATION. THE RESULTS ARE PROMISING AND IT IS PERMANENT. IT'S A SIMPLE 30 MINUTES OUT PATIENT PROCEDURE WITH MINIMAL DOWNTIME SUCH AS SWELLING AND BRUISING AND SURPRISINGLY THE DIMPLE BECOMES MORE VIVID AND DEEP IN THREE WEEKS TIME. THE THREAD I USE IS A U-COG PDO THREAD.

Methods: TOPICAL ANEASTHESIA LOCATION OF DIMPLE DESIGN LOCAL ANEASTHESIA GUAGE 18 NEEDLE FOR ENTRY POINT INSERTION OF THE COG THREAD ANTIOTBIOTS AND PAIN RELIEVER

Results: VISIBLE RESULTS IN SEVEN DAYS WITH A DEEPER AND MORE PRONOUNCE DIMPLE ON THE CHEEK

Conclusions: IT'S ONE OF THE LATEST TREND THAT WE CAN USE AND OFFER TO OUR PATIENT TO CREATE DIMPLE NON-SURGICALLY AND HAS AN AMAZING AND PERMANENT RESULTS

References: Dimple Creation Surgery/Dimpleplasty - PRASAD COSMETIC SURGERY CLINIC 'Dimpleplasty': Newest Millennial Plastic Surgery Trend — What Is It & Would You Do It? - By: Oliva Elgart Is Dimpleplasty Worth It? The Timeless Dimple Definitely Is! – Timeless Plastic Surgery

Submitter
Van Eijk Tom
info@tomvaneijk.nl - Netherlands

Presenter
Van Eijk Tom
info@tomvaneijk.nl - Netherlands

#8440

The Palma Technique; Four dimensional non-surgical infra orbital rejuvenation using hyaluronic acid.

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Van Eijk T

Background/Objectives: Periorbital cosmetic filler injections to rejuvenate or 'freshen' the appearance of the lower eyelids are popular due to the fact that the treatment is less intensive in comparison to surgical procedures. Important in understanding what the effect of the hyaluronic acid injection will be is the notion that the cosmetic/physical effect of the injection is not only depending on the gel properties but also depending on the tissue in which it is injected. When injected in sub dermal (fat) tissue, the hyaluronic acid will act as a 'filler substance' hence adding volume, whereas the same gel injected in the dermis will increase the stiffness of the skin as in the Fern Pattern Technique. Furthermore dermal injections of hyaluronic acid will cause collagen formation. It is the authors suggestion to both fill underneath the skin and repeat these intradermal injections in order to allow the fibroblasts to produce collagen in order to enhance the outcome of the next intradermal treatment.

Submitter
Pearlman Jennifer
drpearlman@pearlrejuvenation.com - Canada

Presenter
Jennifer Pearlman
drpearlman@pearlrejuvenation.com -

#8441

The BioRegenerative Era of Beauty

51 - Regenerative aesthetics

Jennifer P

Background/Objectives: The BioRegenerative Era of Beauty The future of medicine is here. With the power to restore tissue and reprogram youth, bioregenerative medicine is redefining the aging process. Harnessing biostimulators and regenerative therapies with a holistic aesthetic approach a new paradigm of cosmetic care has begun. Discover the most advanced combinations of bioregenerative therapies to help patients look and feel their best.

Submitter
Pearlman Jennifer
drpearlman@pearlrejuvenation.com - Canada

Presenter
Jennifer Pearlman
drpearlman@pearlrejuvenation.com -

#8442

Hormones and the Skin: The skin's amazing endocrine properties and a new era of hormonal aesthetic care

51 - Regenerative aesthetics

Jennifer P

Background/Objectives: Hormones and the Skin The skin's amazing endocrine properties and a new era of hormonal aesthetic care The skin is an endocrine organ that both produces and depends on hormones for optimal health, function, appearance and aging. The skin ages earlier than other tissues and is a visual foray into an individual's health, hormonal, metabolic and inflammatory status. Understanding the relationship between hormones and the skin is key to providing wholistic aesthetic care.

Submitter
Pearlman Jennifer
drpearlman@pearlrejuvenation.com - Canada

Presenter
Pearlman Jennifer
drpearlman@pearlrejuvenation.com -

#8443

Cosmeceutical Hormone Analogues: A new era of skin care

40 - Cosmeceuticals, Peels & Superficial regimens

Pearlman J

Background/Objectives: Cosmeceutical Hormone Analogues: A new era of skin care A new era of smart skin care is exploiting the regenerative capacity of the skin to reprogram youth and revitalize beauty. From exosomes to peptides to hormonal analogues the range of bioactive cosmeceuticals is rapidly expanding. Soft hormone analogues are being developed with targeted effects on the skin and skin appendages and without systemic effects. These hormonal analogues can safely and effectively address the effects of hormonal changes on the skin's health, appearance and aging. Targeted hormonal therapy in conjunction with other bioregenerative skin solutions is redefining medical grade skin care.

Submitter
Doyle Jenny
Jenny@theclinicollandpark.com - United Kingdom

Presenter
Doyle Jennifer
jenny@theclinicollandpark.com - United Kingdom

#8444

Combining broad band light, fractionated ablative laser and polynucleotide injections to resurface surgical or traumatic scars

42 - Scars & acne

Doyle J¹, Scawn R¹

¹The Clinic Holland Park, London, United kingdom

Background/Objectives: Scar revision post trauma or surgery can be difficult to improve with single modalities and often requires multiple treatment sessions. We present our technique and protocols for combining light, laser and injectable modalities to augment patient results. Broadband light can be utilised to improve pigmentation or vascularity aspects of a scar. Fractionated ablative laser resurfacing gradually replaces scar tissue with normal healthy tissue and induces neocollagenesis. Polynucleotides have been also shown to stimulate collagen production and angiogenesis, further supporting the healing process and remodelling of scar tissue.

Submitter
Doyle Jenny
Jenny@theclinic holland park.com - United Kingdom

Presenter
Scawn Richard
richard@theclinic holland park.com - United Kingdom

#8445

Managing periocular complications

48 - Complications - avoidance and management

Scawn R¹, Doyle J¹

¹The Clinic Holland Park, London, United kingdom

Background/Objectives: The periocular area is a difficult area to treat. The skin is the thinnest of anywhere in the body and it can be an unforgiving area to treat. It is also one of the most common areas where patients are seeking rejuvenation. As oculoplastic surgeons we are intimately acquainted with the area so share our experience treating it. We will review the periocular anatomy and detail our approach to patient assessment for this area. We discuss common non-surgical treatments utilised in this area and discuss possible complications and case studies. We review general strategies to mitigate complications of treatment to this area and aim to equip practitioners with knowledge that will help them get the best results for their patients from non-surgical periocular treatments.

Submitter
Vasconcelos Rossana
rossana.vasconcelos@terra.com.br - Brazil

Presenter
Vasconcelos Rossana
rossana.vasconcelos@terra.com.br - Brazil

#8446

Buttocks beautification with hybrid treatment

45 - Combination treatments

Vasconcelos R^{1,2}, Vasconcelos J², Silva M¹

¹Universidade de Santo Amaro, São paulo, Brazil

²Nomina Institute, São paulo, Brazil

Background/Objectives: The demand for body procedures is increasing, with buttocks beautification being one of the most sought-after treatments in dermatological and plastic surgery clinics. Addressing the aesthetic challenges of this area, including sagging, cellulite, contour irregularities, and volume reduction, remains complex. This proposal presents a novel treatment approach using a hybrid solution of hyaluronic acid (HA) and calcium hydroxylapatite (CaHA). HA (26) and CaHA are injected into a deep plane to reshape and volumize the buttocks, while diluted CaHA is applied subdermally for body bio-stimulation. This combined method aims to enhance body contour and improve skin laxity. CaHA is known for stimulating local neocollagenesis, replacing volume, increasing dermal strength and elasticity, and thickening the underlying superficial fascia. However, there is currently no established protocol that tailors the dilution and deep application of CaHA filler simultaneously, based on individual clinical assessments and priorities for contour, sagging, and cellulite.

Submitter
Lee Garry
lookyoungermd@gmail.com - United States

Presenter
Lee Garry
drlee.lookyoungermd@gmail.com -

#8447

Are You Injecting HA Fillers...AGAINST Safety Recommendations?

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Lee G

Background/Objectives: BACKGROUND: For years...we injected hyaluronic acid (HA) wrinkle fillers into the tear trough (TT) and the inferior orbital rim--until July 2023--when the US Food & Drug Administration (FDA) classified¹ periorbital injections "Not Recommended." Classically, most US physicians injected HA filler into the deep cheek fat pads or the periosteum of the inferior orbital rim, with the risk of accidentally injecting into blood vessels, nerves, or muscle. Of course, the prelude to this classification was when Beleznyay and Carruthers et. al. published² their alarming illustration of 98 cases of blindness in 2019--identifying these same high-risk areas for cosmetic filler injections into blood vessels--causing blindness. So... are there any injectable alternatives to treating these areas? Below the inferior orbital rim, Garry R. Lee, MD, describes his Superficial Injection Technique (SIT)--presented for CME nationally in 2022 in the USA--which uses microcannula to inject into the dermal/SQ junction of the cheek and below the tear trough far above the classical injection depth. He illustrates his actual results for comparison and believes bruising, lymphatic occlusion, and complications may be less likely with the shallower depth of penetration. However, injecting superficially into the dermal/SQ junction can also cause more visible lumping or deformity, which Dr. Lee discovered is minimized with his Acupressure Tri-Sculpt Technique (A-TST), which he presents in detail. It is a combination of three original HA filler massage techniques to sculpt wrinkles: 1) Touch and Go; 2) External Compression; and 3) Push and Hold--which can cause remarkably good results. SUMMARY: The US FDA does NOT recommend wrinkle filler injections in the periorbital area. Dr. Lee presents an alternative to inject just below, using his SIT and Acupressure Tri-Sculpt Technique--which he used to WIN the Top 4 Cosmetic Injection Awards in the USA. ¹Assessed 05/27/2024: <https://www.fda.gov/medical-devices/aesthetic-cosmetic-devices/dermal-fillers-soft-tissue-fillers> ²Beleznyay K, Carruthers JDA, Humphrey S, Carruthers A, et al. Update on avoiding and treating blindness from fillers: a recent review of the world literature. *Aesthet Surg J* 2019;39:662-74. Learning Objectives: 1) Describe the facial areas "Not Recommended" for filler injection by the US FDA. 2) Discuss the potential advantages of the Superficial Injection Technique (SIT). 3) Understand the three techniques the Acupressure Tri-Sculpt Technique (A-TST). About Dr. Lee... Dr. Lee is the National WINNER of All Four (4) of the TOP Cosmetic Injection Awards in the USA--in direct competition with hundreds of the TOP Plastic Surgeons, Dermatologists, and Aesthetic Physicians from Beverly Hills to New York City. He placed 2nd in World Competition at the 2015 Aesthetic & Anti-Aging Medicine European Congress Awards for Best Non-Surgical Facial Rejuvenation in Paris, France. Dr. Lee was a physician instructor for Allergan, Galderma, Eclipse Aesthetics, and the CMA, and was the USA Physician Instructor for the Air-Tite TSK Microcannula. His peer-reviewed article was internationally featured as the cover of PRiME Magazine--published extensively in Europe--and his articles appeared regularly in MedEsthetic and The Aesthetic Guide Magazines. After winning, Dr. Lee retired from Aesthetic Medicine Competition in 2020 and from Clinical Practice in 2024, but continues to lecture on how to Look Younger, Without Surgery.

Submitter
Waseem Saman
samanwasim@yahoo.com - Pakistan

Presenter
Waseem Saman
samanwasim@yahoo.com -

#8449

Unlocking the radiant skin through treatment fusion .

41 - Pigmentation

Waseem S

Background/Objectives: Hyperpigmentation is a big challenge to treat Hyperpigmentation is a common pigmentary disorder characterized by increase production of melanin. It is seen in asian skin more. The major reason of hyperpigmentation in Pakistan include melanocyte hyperactivity followed by exposure to ultra violet radiation ,race, use of certain medication ,pregnancy and use of cosmetics. There are variety of resurfacing treatment options but treatments become difficult and challenging due to compliance issues related to affordability and treatment duration . If the patient does not see improvement in 2-3 wks compliance decreases. It is very important to educate our patients about treatment strategies.

Methods: As the aesthetic world is progressing so fast so we must have good management options for the treatment of Melasma or hyperpigmentation .I divided patients into two groups 1)one who will get only one treatment but multiple sessions of that treatment 2)second who get multiple types of treatments in the same patient

Results: Group 1 showed less improvement as compared to group 2. Combination therapy efficacy is better then single therapy.

Conclusions: Treating Melasma or hyperpigmentation with multiple treatment options like chemical peels, lasers, microneedling and mesotherapy surely is more beneficial as compared to single treatment offered repeatedly to the same patient.

Submitter
Waqas Falak
falakwaqas24@gmail.com - Pakistan

Presenter
Waqas Falak
falakwaqas24@gmail.com -

#8450

combining RF microneedling with PDRN for skin rejuvenation

45 - Combination treatments

Waqas F

Background/Objectives: Skin rejuvenation treatments aim to improve skin texture, elasticity, and overall appearance by stimulating collagen production and cellular regeneration. Radiofrequency microneedling (RFMN) is a minimally invasive procedure that uses fine needles and radiofrequency energy to create micro-injuries in the skin, promoting collagen remodeling and skin tightening. Polydeoxyribonucleotide (PDRN) is a biological molecule derived from salmon DNA, known for its regenerative properties and ability to enhance skin healing. Combining RFMN with PDRN may offer synergistic effects for skin rejuvenation.

Methods: A study was conducted involving 50 participants aged 30-60 years with moderate signs of skin aging. Participants were randomly assigned to two groups: one receiving RFMN combined with PDRN and the other receiving RFMN with a placebo solution. Treatments were administered in three sessions, spaced four weeks apart. Skin assessments, including elasticity, texture, and wrinkle depth, were performed at baseline, and at 4, 8, and 12 weeks post-treatment. Patient satisfaction and adverse events were also recorded.

Results: The group treated with RFMN and PDRN showed significantly greater improvements in skin elasticity, texture, and wrinkle reduction compared to the placebo group. Elasticity increased by 35% in the RFMN-PDRN group versus 20% in the RFMN-placebo group. Texture improvements were observed with a 40% reduction in roughness for the RFMN-PDRN group compared to 25% in the control group. Wrinkle depth decreased by 30% in the RFMN-PDRN group versus 15% in the placebo group. Patient satisfaction was higher in the RFMN-PDRN group, with 90% of participants reporting noticeable improvements. Adverse events were minimal and similar in both groups.

Conclusions: The combination of radiofrequency microneedling with PDRN significantly enhances skin rejuvenation outcomes compared to RFMN alone. This synergistic approach leads to greater improvements in skin elasticity, texture, and wrinkle reduction, offering a promising advanced treatment option for patients seeking non-surgical skin rejuvenation. Further studies with larger sample sizes and long-term follow-up are recommended to confirm these findings. 40

References: Cho, S. B., et al. "Clinical Study of Skin Rejuvenation Using Matrix Radiofrequency Microneedle." *Dermatologic Surgery*, vol. 38, no. 7, 2012, pp. 1107-1114. Hantash, B. M., et al. "A Controlled Study of the Mechanism of Skin Rejuvenation Using a Fractional Radiofrequency Device." *Lasers in Surgery and Medicine*, vol. 41, no. 1, 2009, pp. 1-9. Park, J. E., et al. "Polydeoxyribonucleotide Improves Tissue Regeneration and Angiogenesis in a Nude Mouse Full-Thickness Wound Model." *Annals of Dermatology*, vol. 23, no. 3, 2011, pp. 308-315. 40

Submitter
Pupo Dagne
dagnepupo@gmail.com - Spain

Presenter
Pupo Dagné
dagnepupo@dagnepupoclinic.com -

#8451

SKIN WITHIN. (Skin gut axis)

51 - Regenerative aesthetics

Pupo D

Background/Objectives: The aim of this presentation is to analyze the influence of the skin microbiome on skin health and aesthetics, emphasizing the importance of maintaining an optimal microbiological balance in both the skin and the gut. This presentation seeks to provide a comprehensive understanding of how these microorganisms impact skin aging and longevity, as well as to explore the available therapeutic interventions to correct microbiological imbalances in the context of aesthetic treatments.

Methods: This presentation is based on a comprehensive review of recent scientific literature on the skin microbiome and its impact on dermatological health. It includes data from clinical and experimental studies that demonstrate the relationship between dysbiosis and various skin diseases, as well as the potential benefits of probiotic and prebiotic treatments. Current and emerging therapeutic interventions will be discussed, including supplementation, infrared light therapy, intravenous therapy, and personalized nutritional recommendations. The presentation will feature practical case studies and multimodal treatment protocols that integrate microbiome management to enhance skin health and appearance, providing aesthetic medicine professionals with innovative and effective tools for their clinical practices.

Results: 1. **Improved Skin Health**: Patients receiving treatments that included supplementation showed significant improvements in skin conditions such as acne, psoriasis, and atopic dermatitis. 2. **Enhanced Treatment Efficacy**: The integration of microbiome management with traditional aesthetic procedures, such as laser therapy and chemical peels, resulted in enhanced treatment outcomes. Patients experienced faster recovery times and longer-lasting results. 3. **Reduction in Skin Aging Signs**: Interventions targeting the gut-skin axis demonstrated a noticeable decrease in signs of skin aging, including wrinkles and fine lines. The use of infrared light therapy and intravenous treatments contributed to increased skin elasticity and firmness. 4. **Overall Well-being**: Patients reported an overall improvement in well-being and satisfaction with their skin appearance. The holistic approach, addressing both internal and external factors, led to higher patient satisfaction and perceived quality of life.

Conclusions: Understanding and manipulating the skin and gut microbiomes are essential for developing more effective, personalized, and sustainable aesthetic interventions. The future of aesthetic medicine lies in a holistic approach that considers the body's overall health, recognizing that a balanced microbiome is crucial for achieving optimal skin health and beauty. By addressing the microbiome today, we pave the way for more comprehensive and long-lasting aesthetic outcomes, emphasizing that true beauty begins from within. This integrative strategy not only enhances the efficacy of aesthetic treatments but also promotes overall well-being, heralding a new era where health and beauty are intrinsically linked.

References:

Submitter
Sarbazihah Rahi
doctorrahimd@gmail.com - United States

Presenter
Sarbazihah Raheleh
rahi@doctorrahi.com - United States

#8452

Do-It-All Peptides: The Future of Anti-Aging?

51 - Regenerative aesthetics

Sarbazihah R¹

¹Dr Rahi MD INC, Beverly hills, United states

Background/Objectives: This abstract highlights the role of peptides in various domains of health and beauty. It delves into the multifaceted applications of peptides in skincare, anti-aging treatments, weight management, and hair restoration. Peptides have emerged as key players in skincare formulations, offering a range of benefits including improved skin elasticity, hydration, and reduction of inflammation and wrinkles. Peptide-based medications, particularly GLP-1 receptor agonists, have gained attention for their role in weight management and satiety regulation. These medications slow gastric motility, regulate insulin levels, and promote fat loss. Additionally, peptides such as tesamorelin and ipithalon are recognized for their anti-aging properties, enhancing skin quality and overall vitality. Tirzepatide and retratrutide further contribute to the peptide landscape with their potential benefits in metabolic health and weight control. These types of medications also play an important role in hair growth and follicular health. GHK-Cu and BPC-157 are cited as peptides that enhance angiogenesis, improve blood flow to hair follicles, and maintain follicles in the growth phase. Thymosin Beta-4 and Pal-AHK are identified for their ability to strengthen hair, increase density, and stimulate normal growth. There are additional peptides that can be used in medical grade skincare and body treatments. In conclusion, peptides represent versatile and promising agents in skincare, anti-aging, weight management, and hair restoration. By integrating them into clinical practice, healthcare providers can offer innovative solutions to address the evolving needs of their patients.

Methods: real life patient experience

Results: will demonstrate before and after photos of weight loss, hair growth, improvement in skin texture

Conclusions: In conclusion, peptides are versatile and promising agents in the fields of skincare, anti-aging, weight management, and hair restoration. Their multifaceted applications include improving skin elasticity, hydration, reducing wrinkles, regulating weight, and promoting hair health. Peptides such as tesamorelin, ipithalon, tirzepatide, and retratrutide enhance metabolic health and vitality, while GHK-Cu, BPC-157, Thymosin Beta-4, and Pal-AHK support hair growth and strength. Integrating these peptides into clinical practice allows healthcare providers to offer innovative and comprehensive solutions to meet the evolving needs of their patients.

Submitter
Theodorakopoulou Eleni
elinatheos@me.com - Greece

Presenter
Theodorakopoulou Elina (eleni)
pretty.you.gr@gmail.com - Greece

#8455

New horizons in treating hyperpigmentation: plant derived exosomes and microneedling

41 - Pigmentation

Theodorakopoulou E¹, Cho B²

¹Pretty You Dermatology Clinic, Athens, Greece

²ExocoBio, Seoul, South Korea

Background/Objectives: Facial hyperpigmentation is a challenging skin condition that affects 1 in 2 individuals worldwide, while the psychosocial impact of stigma of these patients is high. Topical creams or energy based devices have shown some efficacy, though it is not without a high risk of side effect. Exosomes have enormous potential as therapeutic and cosmetic ingredients for the skin, with minimal adverse reactions. We hypothesized that plant derived exosomes can potentially improve pigmentation, with minimal side effects, while ameliorate the quality of life of these patients.

Methods: 12 female volunteers with a mean age of 46.64 years, skin type II-IV and a diagnosis of either melasma, or solar lentigines or postinflammatory pigmentation, were enrolled in this study. Treatment protocol consisted of 3 sessions of non-thermal microneedling with topical rose stem cell derived exosomes-RSCE (5ml), spaced 3 weeks apart. Post microneedling, patients were placed under red LED UV lamp with a RSCE infused mask, for 20 minutes. Subjects were also followed up for another 6 weeks time after their last treatment. Clinical photography, skin imaging analysis, GAIS scores and the psychometric questionnaires for quality of life, DLQI and MELASQoL, were documented at each visit (baseline, visits 1,2 and 3-follow up).

Results: Gais scores improved by at least one scale point. Superficial pigmentation and spots decreased by 12.95% and deep pigmentation improved by 15.9 %, by week 12. Skin redness was reduced by 7.34% at the same timepoint. Measured wrinkle reduction was 6.34%. DLQI scores were reduced by 10 points, and MELASQoL scores had a mean reduction of 30 points at week 12.

Conclusions: Our study is the first to test the efficacy and safety of RSCE on human skin, as well as the improvement of psychosocial burden of pigmentary conditions after treatment. Further larger clinical studies are needed to confirm the findings presented here.

References: Cho, B.S.; Lee, J.; Won, Y.; Duncan, D.I.; Jin, R.C.; Lee, J.; Kwon, H.H.; Park, G.-H.; Yang, S.H.; Park, B.C.; et al. Skin Brightening Efficacy of Exosomes Derived from Human Adipose Tissue-Derived Stem/Stromal Cells: A Prospective, Split-Face, Randomized Placebo-Controlled Study. *Cosmetics* 2020, 7, 90. <https://doi.org/10.3390/cosmetics7040090> Kwon HH, Yang SH, Lee J, Park BC, Park KY, Jung JY, Bae Y, Park GH. Combination Treatment with Human Adipose Tissue Stem Cell-derived Exosomes and Fractional CO₂ Laser for Acne Scars: A 12-week Prospective, Double-blind, Randomized, Split-face Study. *Acta Derm Venereol.* 2020 Nov 4;100(18):adv00310. doi: 10.2340/00015555-3666. Park GH, Kwon HH, Seok J, Yang SH, Lee J, Park BC, Shin E, Park KY. Efficacy of combined treatment with human adipose tissue stem cell-derived exosome-containing solution and microneedling for facial skin aging: A 12-week prospective, randomized, split-face study. *J Cosmet Dermatol.* 2023 Dec;22(12):3418-3426. doi: 10.1111/jocd.15872. Waghule T, Singhvi G, Dubey SK, Pandey MM, Gupta G, Singh M, Dua K. Microneedles: A smart approach and increasing potential for transdermal drug delivery system. *Biomedicine & Pharmacotherapy.* 2019; 109:1249-1258. doi: 10.1016/j.biopha.2018.10.078. Won YJ, Lee E, Min SY, Cho BS. Biological Function of Exosome-like Particles Isolated from Rose (Rosa Damascena) Stem Cell Culture Supernatant. *Biorxiv.* 2023.10.17.562840doi: <https://doi.org/10.1101/2023.10.17.562840> Waggle, Singhvi G, Dubey SK, Pandey MM, Gupta G, Singh M, Dua K. Microneedles: A smart approach and increasing potential for transdermal drug delivery system. *Biomedicine & Pharmacotherapy.* 2019; 109:1249-1258. doi: 10.1016/j.biopha.2018.10.078. Gordon H, Sasaki, Micro-Needling Depth Penetration, Presence of Pigment Particles, and Fluorescein-Stained Platelets: Clinical Usage for Aesthetic Concerns, *Aesthetic Surgery Journal*, Volume 37, Issue 1, 1 January 2017, Pages 71–83, <https://doi.org/10.1093/asj/sjw120> Duncan DI. Microneedling with Biologicals: Advantages and Limitations. *Facial Plast Surg Clin North Am.* 2018 Nov;26(4):447-454. doi: 10.1016/j.fsc.2018.06.006.

Submitter
Decangchon Francis
decangchonfrancis@yahoo.com - Philippines

Presenter
Decangchon Francis
decangchonfrancis@yahoo.com -

#8456

MASTER THE TIP, MASTER THE NOSE (THREADLIFT RHINOPLASTY): PEARLS & GEMS

46 - Threads

Decangchon F

Background/Objectives: Nasal augmentation and enhancement is one of the most popular aesthetic treatment in the world, especially in Asia. Compared to the Caucasian nose, the Asian nose has a lower and broader dorsum, shorter nasal bones, bulbous and poorly projected tip, as well as thicker skin. Consequently the commonest requests for nasal enhancement involve correction of the nasal bridge, dorsal hump correction, and nasal tip enhancement. The shape of the nose determines the character of the face. The shape of the tip of the nose has a big influence on the overall appearance of the nose and is often the most important aspect of a beautiful nose. A nasal tip that is too wide, or too pointy, can diminish the overall beauty of the face. In addition to refining the shape of the nose, tip enhancement can improve the general aesthetic harmony of the face. Non-surgical nasal remodeling techniques with threads provide correction of nasal deformities with ease; like elevating the nasal bridge and dorsum, most importantly refine and sharpen the nasal tip, one indication that dermal fillers can't achieve with amazing and longer lasting results. Intra-operative techniques of non-surgical thread lifting to achieve nasal tip refinement, creating a sharp, raised nose tip without the aid of a surgical knife will be shown and demonstrated in the video. Pre-operative planning and post-operative tips and pointers will be discussed to achieve optimum and best outcomes/practices and results on mostly Asian patients. See fantastic results on challenging and almost hopeless cases.

Submitter
Decangchon Francis
decangchonfrancis@yahoo.com - Philippines

Presenter
Decangchon Francis
deangchonfrancis@yahoo.com -

#8457

Labial Puffing: Bespoke Treatment for Female Intimate Rejuvenation

47 - Genital restoration & Functional gynecology

Decangchon F

Background/Objectives: Female genital rejuvenation and restoration is growing in recent years. As women age, they lose fat from not only their faces and breasts but also there is an atrophy of the labia majora. This creates a droopy and saggy appearance of the labia majora or outer, more visible lip of the female genitalia. Many of these women are postmenopausal but some have lost a significant amount of weight or have poor tissue elasticity. Sex may become more uncomfortable due to the loss of natural padding along the pubic bones. And as more and more women shave or wax their pubic hair, the new wrinkling gets more obvious. Some women opt to fill this area with temporary injectable hyaluronic acid-based fillers and some by fat grafting. Fat grafting involves removing fat from one area of the body and re-injecting it to areas that need plumping. The fat will lead to a fuller, more rejuvenated appearance and the results will be permanent. It can also improve vaginal dryness, mucosa trophicity, genito-urinary symptoms of menopause (GSM) and loss of elasticity and volume of external genitalia. This autologous procedure is able to provide a very good rejuvenation of the female genital area. Labia majora augmentation by autologous fat transfer enhances the volume, shape, symmetry, firmness, and contour of atrophied labia majora. The procedure is similar in principle to other cosmetic dermal surgeries that utilize microfat injection to repair sagging, lax, and wrinkled skin. Aging or rapid weight loss causes a loss of hyaluronic acid, dermal collagen, and fat in the labia majora leading to potential laxity of the labia majora, decreased volume, wrinkles, discoloration, and sometimes reduced skin elasticity. Hypotrophic labia majora may be too small to cover the labia minora, thus making the minora look unusually large. Atrophy of the labia majora can cause exposure of the labia minora, resulting in dryness. To correct labia majora atrophy, autologous fat is injected into the subcutaneous fat layer of the labia majora where it serves as a filler. The redundancy of the labia majora may be reduced surgically or noninvasively and in situations where labia majora skin excess is minimal but deflation is present, volume enhancement with fat grafting may offer the best option. Cosmetic surgery of the female perineum is within the realm of Female Genital Cosmetic Surgeon. Labiaplasty creates high patient satisfaction, with a low incidence of complications. Adjunctive procedures may create a better global appearance to the vulvar area.

Submitter
Somsup Sarittha
sarittha@hotmail.com - France

Presenter
Dr.sarittha Somsup
sarittha@hotmail.com - France

#8458

How to achieve centenarian longevity with gene and advance Hybrid therapy in clinical practice.

62 - Anti-aging & integrative medicine

Dr.sarittha S¹

¹Dermatologist ,Neurologist,Antiaging Medicines , France, France

Background/Objectives: Centenarian longevity is determined by the inherit genes. Some genes promote longevity, including those that encode antioxidant enzymes and heat-shock proteins. Other genes that are associated with serum lipid levels, glycation reaction, repeated inflammation process and immune systems contribute significantly to longevity. Aging is a multifactorial and complex process represented by low energy levels, stress induced loss of homeostasis leading to the risk of diseases and mortality, the functional decline of tissues and organs due to changes in molecular composition and physiology of cells. More than fifty genes reported in the literature for their contributions to the longevity of life. Intact genomic DNA is essential for the longevity at the level of cell, tissue, and organ. The study provides an updated account of genetic factors associated with the extended lifespan and their interactive contributory role with cellular pathways with gene and advance Hybrid therapy in clinical practice including with epigenetics modification for prevention environmental factors which constraints of genetics to either protect or predispose to degenerative diseases.

Methods: The trial in clinical practice to achieve centenarian longevity with gene and advance Hybrid therapy by promoting longevity gene and prevent risk factor that contribute inflammation and degeneration process by gene therapy with stem cell and chorion exosome intramuscular therapy, Metallothionein 1,2,3 (MT1,2,3) intramuscular therapy ,increasing energy level of cells by NAD intravenous infusion, reduce stress of cells,balance homeostasis and deglycation of cell by intravenous multivitamins ,intravenous minerals, deglycating molecules and antioxidation molecules including TMS and biofeedback for brain plasticity and regeneration were perform in 5 women age of 90-95 years old.

Results: After 6 months of gene and advance Hybrid therapy protocol with em cell and chorion exosome intramuscular therapy, Metallothionein 1,2,3 (MT1,2,3) intramuscular therapy ,increasing energy level of cells by NAD intravenous infusion, reduce stress of cells,balance homeostasis and deglycation of cell by intravenous multivitamins ,intravenous minerals, deglycating molecules and antioxidation molecules including TMS and biofeedback for brain plasticity and regeneration.All of cases were improve in quality of life as increase of energy, improve of cognitive function, good mood, decrease sarcopenia, slow decline of degenerative process as more healthy skin, decrease grey hair, reborn of new hair, good control of blood pressure, good control of lipid profile and good control of HbA1c.

Conclusions: The gene and advance Hybrid therapy protocol with em cell and chorion exosome intramuscular therapy, Metallothionein 1,2,3 (MT1,2,3) intramuscular therapy ,increasing energy level of cells by NAD intravenous infusion, reduce stress of cells,balance homeostasis and deglycation of cell by intravenous multivitamins ,intravenous minerals, deglycating molecules and antioxidation molecules including TMS and biofeedback for brain plasticity and regeneration could help to achieve centenarian longevity with good quality of life as increase of energy, improve of cognitive function, good mood, decrease sarcopenia, slow decline of degenerative process.

References:Vaupel J.W., Villavicencio F., Bergeron-Boucher M.-P. Demographic perspectives on the rise of longevity. Proc. Natl. Acad. Sci. USA. 2021;118:e2019536118. doi: 10.1073/pnas.2019536118. Van den Berg N., Rodríguez-Girondo M., van Dijk I., Mourits R., Mandemakers K., Janssens A., Beekman M., Smith K., Slagboom P. Longevity defined as top 10% survivors and beyond is transmitted as a quantitative genetic trait. Nat Commun. 2019;10:35. doi: 10.1038/s41467-018-07925-0. Wijsman C.A., Rozing M.P., Streefland T.C., le Cessie S., Mooijaart S.P., Slagboom P.E., Westendorp R.G., Pijl H., van Heemst D., Leiden Longevity Study Group Familial longevity is marked by enhanced insulin sensitivity. Aging Cell. 2011;10:114–121. doi: 10.1111/j.1474-9726.2010.00650.x. Vaarhorst A.A., Beekman M., Suchiman E.H., Van Heemst D., Houwing-Duistermaat J.J., Westendorp R.G., Slagboom P.E., Heijmans B.T. Lipid metabolism in long-lived families: The Leiden Longevity Study. Age. 2011;33:219–227. doi: 10.1007/s11357-010-9172-6. Deelen J., Evans D.S., Arking D.E., Tesi N., Nygaard M., Liu X., Wojczynski M.K., Biggs M.L., van Der Spek A., Atzmon G. A meta-analysis of genome-wide association studies identifies multiple longevity genes. Nat. Commun. 2019;10:3669. doi: 10.1038/s41467-019-11558-2.

Submitter
Saenz, Iii Gilberto
austinaestheticpa@gmail.com - United States

Presenter
Saenz, Iii Gilberto
austinaestheticpa@gmail.com - United States

#8460

Cellulite- The New Frontier of Combination Therapy

50 - Body contouring & skin tightening

Saenz, Iii G¹

¹Austin Plastic Surgeon, Austin, tx, United states

Background/Objectives: Purpose of this presentation would be to educate on the treatment options available to address an aesthetic condition that affects approximately 90% of all women and some men. Discussion would focus on the treatment of cellulite (Gynoid Lipodystrophy) using targeted verifiable subcision (ie. Aveli) with the added benefits of treating skin laxity with a variety of energy based devices (EBDs), as well as contour deformities with Biostimulatory fillers or allogeneic fat. Discussion of potential risks and complications would be included as well as how to best manage any complications that may arise.

Submitter
Quân Nguyễn
bsnguyenduyquan@gmail.com - Vietnam

Presenter
Quan Nguyen
bsnguyenduyquan@gmail.com -

#8474

Application of pulse-dye laser (PDL) in the treatment of mesotherapy-induced nodules: a case series

48 - Complications - avoidance and management

Quan N

Background/Objectives: Mesotherapy is a widely used technique in which microinjections of medications are delivered into dermis or deeper skin layers. In cosmetic dermatology, mesotherapy improves skin moisture, reduce wrinkles and may help in some pigmented disorders. The safety of mesotherapy mainly depends on the substances which were injected into the skin. In Vietnam, many people underwent this procedure for cosmetic purposes by unlicensed practioners at inadequate spa or even at home. There is a lack of information about the substances that were used. Most of our patients came with multiple nodules appear after 1-3 days post-mesotherpy, the diameter ranged from 0.2- 1cm, redness and swelling were noted. A board spectrum antibiotic and anti-inflammatory agent (corticosteroid) were prescriped. Pulsed dye laser (PDL) was early used after 1-2 weeks. Our PDL device is Vbeam Perfecta and the mode “scars” or “inflammatory acne vulgaris” are used commonly. The significant improvement was seen in most of our patients just after 1-3 sessions (the interval time was 2-4 weeks): the lesions reduced in diameter and redness. Some patients improved 80-90% after 2-3 months. From our experience, PDL can be considered as a good therapy to early control the mesotherapy induced inflammation and can help to reduce the duration of corticosteroid use.

Submitter
Thanh Dung Dang
bsdangthanhdung@gmail.com - Vietnam

Presenter
Thanh Dung Dang
bsdangthanhdung@gmail.com -

#8475

NASAL THREAD PROTRUSION: HOW TO EXTRACT WITH A SMALL PUNCTURE FROM NASAL DORSUM

46 - Threads

Thanh Dung D

Background/Objectives: Background: Asians typically have a smaller and a less distinct nose, and thus, cosmetic nose enhancement procedures are popular. So, augmentation of the dorsal tip is very popular and is considered an important aspect of achieving a natural and balanced nose. Non-surgical rhinoplasty, particularly involving minimally invasive nose thread procedures, offers precise nasal contouring and augmentation.

Methods: Methods: This case report details a complication of thread protrusion following a nose thread procedure with Poly-L-Lactic Acid (PLLA) threads, lasting more than two years. A 52-year-old female patient presented with visible and palpable threads under the skin, but without signs of inflammation. Surgical removal of the threads was performed through small incisions. The procedure revealed intact but thornless threads, necessitating multiple incisions for complete removal. One month post-surgery, no signs of thread protrusion or inflammation were observed.

Results: Results: This case highlights the potential for long-term complications with PLLA threads and emphasizes the importance of proper thread placement and the consideration of surgical removal if protrusion occurs.

Conclusions: Conclusions: This abstract summarizes the key points of the case report, including the complication, patient presentation, treatment, and outcome. Finally, the review underscores the importance of recognizing potential risks and promptly addressing complications like thread extrusion, migration, and infections. Understanding these complexities in non-surgical rhinoplasty aids in informed decision-making and efficient patient care.

Submitter
Nga Quynh
lyquynhnga6868@gmail.com - Vietnam

Presenter
Nga Ly Quynh
lyquynhnga6868@gmail.com -

#8476

32P-patch induced hypopigmented scar : significant improvement with autologous epidermal grafting - a case report

41 - Pigmentation

Nga L

Background/Objectives: Port-wine stains (PWS) are one of the most common vascular anomalies in Vietnam. In the past, due to the lack of vascular lasers such as PDL, many Vietnamese with PWS use P32 patch to treat. Although, this technique may help to clear the birthmark, the sequelae were ulcers, hyper and hypopigmented scars. We present a case with a complex hyperpigmented and hypopigmented scar on the neck which was induced by the P-32 patch. In this case, we combine autologous epidermal grafting and excimer laser with topical tacrolimus. Firstly, topical tacrolimus was used for 2 weeks. After that we did autologous epidermal grafting by taking 5 blisters from the front of the thigh near the inguinal fold. Hypopigmented areas were prepared with fractional CO2 and dermabrasion. Five blisters are separated to remove the epidermis and placed on the prepared skin areas. After 2 weeks, the patients continued to receive excimer laser treatment twice a week, a significant improvement was seen most of the hypopigmented scar were re-pigmented. P32-patch scar is rare, however it causes significant cosmetic problems, especially located on the face or neck.

Submitter
Nguyen Hai
truonghai313@gmail.com - Vietnam

Presenter
Hai Nguyen
Truonghai313@gmail.com -

#8477

Reviving Skin: Motorized Micropunch Grafting with SST for Hypopigmented Scar Repigmentation

56 - Minimally invasive surgery / Minimally invasive advances

Hai N

Background/Objectives: Hypopigmented scarring is a common complication, particularly in patients who have undergone surgical procedures, deep or medium-depth resurfacing procedures, or have a prior history of traumatic wounds or burns. Although it does not cause as much impact as keloid or hypertrophic scars, hypopigmented scars are usually permanent. Some patients find white scars unsightly, while others view them as reminders of unpleasant experiences, such as suicide attempts, trauma, or cosmetic surgery. This often leads them to seek treatment to restore their natural skin color. Improving the appearance of hypopigmented scars remains a challenge due to the limited efficacy, variable safety, and scarcity of effective and practical treatment options with long-lasting results. Several modalities have been employed to treat hypopigmented scarring, including skin grafting, scar excision or revision, cosmetic camouflage, cosmetic tattooing, dermabrasion, chemical peels, and various forms of phototherapy and laser resurfacing. However, the efficacy of these methods is limited, and there is currently no gold standard. Motorized micropunch grafting with the skin-seeding technique (SST) was introduced as an effective option for repigmenting vitiligo. Recently, motorized micropunch grafting with the skin-seeding technique (SST) has been applied to hypopigmented scars for repigmentation, offering better compliance due to its easier and faster procedure with less pain. This topic will discuss the use of motorized micropunch grafting with SST for treating hypopigmented scars and present some clinical cases treated at Medicare Dermatology Clinic. Keywords: hypopigmented scars, motorized micropunch grafting, skin-seeding technique, SST, repigmentation, non-surgical treatment, dermatology

Submiter
De Sá Juliana Chieppe
juchieppe@gmail.com - Brazil

Presenter
Chieppe Juliana
juchieppe@gmail.com - Brazil

#8479

AN EFFECTIVE APPROACH TO IMPROVE THE CHIN AND THE APPEARANCE OF RETROGNATHIA

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Chieppe J¹

¹Clínica Sá e Chieppe Dermatologia, Salvador, Brazil

Background/Objectives: The lower third of the face is frequently ignored by practitioners in aesthetic facial treatments. This may be because many patients underestimate the importance of both the chin and the jaw in the overall appearance of the face. Injection with hyaluronic acid (HA) filler has become a conservative treatment option for retrognathia as a less invasive alternative to surgical treatment. Retrognathia is a recessed position of the jaw and can be a difficult condition to correct if the proper method and technique are not understood. Frequently, practitioners tend to focus solely on the chin and neglect the jawline. Yet, to effectively treat retrognathia, the appearance of the jawline must be brought forward. This case highlights a 32-year-old female patient who presented with vertical and horizontal micrognathia and complained about a lack of jawline definition.

Methods: The treatment was performed in one session. Photos (pre-, immediately post-, and 30 days post-procedure) were taken. In the assessment, the pinch test indicated sagginess in her face, and collagen stimulation was considered to be beneficial. A hybrid filler (consisting of hyaluronic acid combined with calcium hydroxyapatite) was injected subcutaneously in the zygomatic arch, parotid-masseteric area and mandible line using a 22G blunt-tip cannula. Part of this treatment involved the use of the MD Codes technique. The lower face was addressed by treating the chin and the mandible line. The injection of the chin was performed with a 25G blunt-tip cannula using two different approaches: the first approach was to inject HA above the mentalis muscle in the labiomental sulcus and in the chin apex (in order to diminish its function through myomodulation, improve the labiomental angle and increase the chin vertical height). The second approach was to advance the mandible area. This was done by injecting HA at the lower pre-jowl area and in the lower anterior chin.

Results: Immediately after treatment, the reduction of the protrusion of the lower lip (due to increased chin support) and the improvement in the jawline definition are both clearly evident. The refinement of these specific areas greatly enhances the overall contour and balance of the face. In the right profile position (pre-procedure and immediately post-procedure), the chin advancement is notable and this greatly contributes to the reduction of the double chin. Post-treatment, with support in the soft tissue of the chin and lips, the mentalis muscle and orbicularis oris contract in a more coordinated and uniform manner - rendering a more balanced appearance. The direction of movement while pursing the lips was horizontal. The treatment effects are sustained after 30 days.

Conclusions: This clinical case is compelling because it demonstrates the need to address the jawline when treating a patient who complains of retrognathia. To advance the appearance of the jaw and reduce the submental sagginess, it is essential to inject not only the chin area, but also, the jawline. By identifying and understanding the unique anatomical characteristics of these areas, practitioners can treat the chin and retrognathia more effectively and, therefore, achieve far greater patient satisfaction.

References: Swift A, Liew S, Weinkle S, Garcia JK, Silberberg MB. The Facial Aging Process From the "Inside Out". *Aesthet Surg J*. 2021 Sep 14;41(10):1107-1119. doi: 10.1093/asj/sjaa339. de Maio M. The 7-point Shape and The 9-point Shape: An Innovative Nonsurgical Approach to Improve the Facial Shape. *Facial Plast Surg*. 2022 Apr;38(2):102-110. doi: 10.1055/s-0041-1741499. Epub 2022 Feb 3. Erratum in: *Facial Plast Surg*. 2022 Apr;38(2):e1-e2. PMID: 35114709. de Maio M. Myomodulation with Injectable Fillers: An Innovative Approach to Addressing Facial Muscle Movement. *Aesthetic Plast Surg*. 2020 Aug;44(4):1300-1316. doi: 10.1007/s00266-020-01825-9. Epub 2018 Mar 16. PMID: 32844271.

Submitter
Phan Minh Doan
bs.minhdoan@gmail.com - Vietnam

Presenter
Phan đoàn
bs.minhdoan@gmail.com -

#8480

Complication of mesotherapy in Vietnam and its management

48 - Complications - avoidance and management

Background/Objectives: Complication of mesotherapy in Vietnam and its management Mesotherapy has become a less invasive trend in the Vietnamese cosmetic market in recent years. The costs of treatment and the qualifications required for a doctor to perform micro-injections in Vietnam are relatively high, leading to the emergence of many unauthorized micro-injection practices at homes, spas, or unlicensed clinics. Lack of knowledge, skills, and experience, sometimes even by non-medical personnel performing the injections, has resulted in numerous complications post micro-injection, stemming from medication mixing, injection techniques, or incorrect combination of micro-injection methods with other maladies. The consequences of such improper practices sometimes leave irreversible complications. Through this report, the presenter shares with colleagues worldwide the cases of complications in Vietnam, how we have encountered, treated, and the outcomes of such treatments. Through this, we draw lessons learned and aim to enhance our professional expertise.

Submitter
Elachkar Ibrahim
ibachkar@hotmail.com - Lebanon

Presenter
Ibrahim Achkar
ibachkar@hotmail.com -

#8483

New Term in Aesthetic Medicine: The Dancing Chin

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Ibrahim A

Background/Objectives: I'd like to present a new term in Aesthetic Medicine: The Dancing Chin, to patients, physicians, dermatologists, aesthetic doctors and plastic surgeons to aware people of this phenomenon, and to get an early treatment.

Methods: While examining many of my patients' faces, I noticed that their chins were moving while they spoke to me. It was difficult for me to convince them of the importance of identifying this condition, because dancing chin is often ignored by patients themselves, (because they do not speak usually in front of a mirror) but it may be noticed by their surroundings. To address this, I requested permission from some of my patients to film their lips, chin, and neck while they speak, and they agreed.

Results: After examining and comparing multiple videos and merging them into one frame, I discovered that the chin moves in a "dancing" manner.

Conclusions: As "Dancing chin" is a phenomenon if ignored can lead to chin deformity and facial disharmony, to avoid this problem plastic surgeons, aesthetic doctors, dermatologists, medical professionals, and patients should be aware of its aesthetic implications. Dancing chin must be popular as "orange skin", "marionette lines", "lion wrinkles" or "crow's feet" (etc..) to be aware of this pathology and treat it before it leads to orange skin, golf ball, marionette lines and facial ptosis.

Submitter
Elachkar Ibrahim
ibachkar@hotmail.com - Lebanon

Presenter
Ibrahim Achkar
ibachkar@hotmail.com -

#8484

Achkar Tip Graft in open rhinoplasty

77 - Unclassified topics

Ibrahim A

Background/Objectives: One of the most important and difficult aspects of rhinoplastic surgery is creating an elegant, nicely shaped, natural appearing nasal tip with respect to the proportionality of its width and projection. The most well-known nasal tip grafts are the sheen shield graft, the Peck onlay graft and the Guyuron modification; all these grafts are issued from septal cartilage. I herein propose a new tip graft "Achkar tip graft" issued from the dorsal hump that can be used in primary rhinoplasty or in some secondary rhinoplasty. The three-dimensional cartilage issued from the dorsal hump is cut perpendicularly to the long axis of the dorsal hump and it results in a three wings T shaped cartilage. This T shaped structure have three wings; it is composed of the nasal septum cartilage (the hard wing) and the upper right and left lateral cartilages (the soft wings). This graft is named "Achkar tip graft" and will be used as a tip graft material. The positioning of the graft depends essentially on the thickness of the skin of the nose; when the skin is thick, I put the hardest wing toward the front tip and when it is thin, I usually orient the soft wing toward the front tip. "Achkar tip graft" forms a ligand binding-like fact that binds perfectly to the underlying alar cartilage and columellar strut, which permit a rapid orientation and fixation. The "Achkar tip graft" can be easily used in any nose shape with non-defined, over projected or under projected tip; it is also indicated when the skin of the nasal tip is thin or thick. The most important advantages of this graft are the easy and the rapid orientation of the nasal tip to having an excellent result.

Submitter
Jiajun Wu
s2009178@126.com - China

Presenter
Jiajun Wu
shanghai shengya cosmetic hospital -

#8489

A novel technique for the improvement of the nasolabial fold with buried suture method

56 - Minimally invasive surgery / Minimally invasive advances

Jiajun W

Background/Objectives: Correction of the nasolabial fold has been the challenge constantly faced by the plastic surgeon since the start of attempts at facial rejuvenation. In this paper we intend to show our quite different method of approach to the correction of this challenging anatomic detail. It consists of cutting the fabric fat tissue which forms the nasolabial fold, putting the buried suture net of shield shape, without touching or dissecting the superficial aponeurotic muscular system (SMAS) and without filling any fillers which could make it difficult to observe this different procedure. Results: The technique was used on 358 patients, and all the patients were satisfied with the results. There were no serious complications.

Submitter
Lebbar Noura
dott.noura.lebbar@gmail.com - Italy

Presenter
Lebbar Noura
dott.noura.lebbar@gmail.com -

#8490

The role of Platelet Rich Plasma in jawline definition and face contouring

51 - Regenerative aesthetics

Lebbar N

Background/Objectives: The future of aesthetic medicine is regenerative medicine using a conservative approach. Actually we have many patients' requests to restore the jawline area from 20th year age until 70 years. As the demanding patients are becoming younger, we need to use a conservative approach rather than filling with an important quantity of fillers leading to the classical pillow faces and heavy jawline because of the filler migration following the gravity. The aim of the study is to show the efficiency of a new autologous natural approach using platelet rich plasma clot for face contouring.

Methods: I use the platelet rich plasma tubes with a separating gel as a medical device containing an antithrombin allowing the formation of a clot. I mix the prp with the fibrin clot with a ratio 9/1 then I use a 27 G needle and inject deeply on the periosteum in the mandibular angle. I use the same technique injecting deeply perpendicularly with a needle on the upper zygomatic area achieving a middle face lifting; and then I use a 22 g cannula 70mm and inject along the mandibular line to reshape it. The rationale in using a cannula along the mandibular line is to avoid injecting the facial artery. I always also assess the chin and improve its projection using 1ml of prp+clot with a 27G needle perpendicularly & deeply on the periosteum. The total prp volume used for the full face contouring is 10 ml. I always end my session by injecting also the neck superficially in the dermis. My approach to obtain the V shape and restore the face contouring is very conservative, will allow me to stimulate the fibroblasts with a new collagen and elastin fibers synthesis, and in the meantime to restore the volume using the prp clot. I repeat the session after 1 month for 2 times for a total of 3 sessions.

Results: The result is an immediate jawline definition, an improvement of the skin texture and a glowing effect on the skin thanks to the growth factors contained in the prp. No short or long term side effects have been noticed.

Conclusions: The future of aesthetic medicine is conservative and regenerative medicine allowing to use autologous growth factors stimulating the fibroblasts to produce more collagen elastin fibers and endogenous hyaluronic acid. As the social media influence is impacting the young generations demanding always more aesthetic procedures, our role as cosmetic doctor is to direct the patients towards safe autologous regenerative and conservative approaches. That insure the safety and the absence of any side effects in next and long term. Using a prp medical device clot, we can reshape the jawline creating volume on the right face lifting points using a complete autologous and conservative approach.

References: Progress in the Use of Platelet-rich Plasma in Aesthetic and Medical Dermatology. Lin MY, et al. J Clin Aesthet Dermatol. 2020. Platelet-Rich Plasma: A Comprehensive Review of Emerging Applications in Medical and Aesthetic Dermatology. White C, et al. J Clin Aesthet Dermatol. 2021.

Submitter
Lebbar Noura
dott.noura.lebbar@gmail.com - Italy

Presenter
Lebbar Noura
dott.noura.lebbar@gmail.com -

#8491

Endo-radiofrequency medical lifting combined with Platelet rich plasma

56 - Minimally invasive surgery / Minimally invasive advances

Lebbar N

Background/Objectives: The purpose of this study is to confirm the regenerative and lifting effect of the combined procedure endo-radiofrequency & Platelet rich plasma. The neocollagenesis & ne elastogenesis stimulation generated by the heat produced by the endo-radiofrequency is amplified by the intracutaneous PRP injection. The perfect temperature control on the subdermal layer is indispensable to ensure a total safety of the procedure. The regenerative effect of the growth factors contained in the PRP on the dermal fibroblasts is well approved since many years in the field of anti-aging medicine. The thermal-regulated endo-radiofrequency is a new technology which allows to reach a temperature of 57 degrees on the deeper dermal layer using a thermo cannula. Combining both procedures during the same session allows us to improve the skin texture and to obtain a medical lifting improving the jaw-line definition.

Methods: I have treated two female patients aged 45 & 55 years. The treatment was performed on the middle & lower face with thermoregulated endo-radiofrequency using a thermo-cannula introduced in the subdermal layer from a lateral entry-point on the mandibular angle and reaching a temperature of 55 degrees for both patients. The procedure lasted 30 minutes, 15 minutes on each half face. Immediately after the endo-radiofrequency, I drew 20 ml of blood that I spun for 3 minutes 3000 rpm (1500G), I obtained 13 ml of pure PRP. Then I obtained 6 ml of autologous filler gel plasma rich in growth factors that I have used to improve the volume of the mandibular angle, for chin and cheek augmentation. The rest of the liquid plasma rich in growth factors have been injected with a cannula 25 G in the dermis on the whole middle & lower face included the tear trough area.

Results: No medication was prescribed after the treatment, no side effects as edema swelling or bruising was observed. I controlled the patients twice after 1 month & 3 months. The immediate result was a remarkable lifting effect with an immediate skin tightening improving the jawline definition. The improvement of the skin texture was more evident after 1 month. The best result was obvious on the third month as the maximum dermal neocollagenesis & ne elastogenesis is noticed 3 months after fibroblast stimulation.

Conclusions: The combined procedure using both the lifting effect of the endo-radiofrequency & the regenerative effect of the platelet rich plasma is extremely effective to obtain a medical lifting improving the jawline definition & the skin texture at the same time. The procedure is absolutely painless very safe and doesn't cause any side effects. The result is immediately visible because of the immediate skin tightening due to the endo-radiofrequency tissue heating, although the skin texture improves drastically thanks to the growth factors as VEGF, iGF, FGF contained in the platelet rich plasma

References: Platelet rich in growth factor gel as an autologous filler for facial volume restoration. Godfrey L, Martínez-Escribano J, Roo E, Pino A, Anitua E. *J Cosmet Dermatol*. 2020 Oct;19(10):2552-2559. Diab HM, Elhosseiny R, Bedair NI, Khorkhed AH. Efficacy and safety of plasma gel versus platelet-rich plasma in periorbital rejuvenation: a comparative split-face clinical and Antera 3D camera study. *Arch Dermatol Res*. 2021 Jul 6. doi: 10.1007/s00403-021-02270-7.

Submitter
Lebbar Noura
dott.noura.lebbar@gmail.com - Italy

Presenter
Lebbar Noura
dott.noura.lebbar@gmail.com -

#8492

Tear trough deformity correction: Hyaluronic acid versus platelet rich plasma

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Lebbar N

Background/Objectives: The correction of the tear trough deformity is a highly requested treatment in my daily practice, with excellent immediate results but it is the treatment that can give more complications in the short term and above all in the long term. for several years I have used hyaluronic acid but since the request for treatments is made by increasingly younger patients I have chosen to use plasma rich in growth factors to correct the dyschromia of the lower eyelids, and when I need to volumize the lacrimal sulcus, I use platelet rich growth factor gel biofiller based on the patient's autologous plasma. Since the complications of using hyaluronic acid-based fillers to correct the tear trough deformity, as edema and swelling, can occur even years after the treatment, I have chosen not to use hyaluronic acid-based fillers in patients younger than 30 years.

Submiter
Jose Eduardo Chicarelli Martin
eduardochicarelli10@gmail.com - Brazil

Presenter
Jose Eduardo Chicarelli Martin
eduardochicarelli10@gmail.com - Brazil

#8493

The neocollagenesis potential of dermal fillers and its impact on Regenerative Medicine: an integrative review

51 - Regenerative aesthetics

Jose Eduardo C¹

¹ESSENCE CLINIQUE, São paulo, Brazil

Background/Objectives: The molecular bases of skin aging involve a complex biological process. The demand from patients, within the scope of Cosmiatry, to address aging complaints brings about the need for a better understanding of the dermal fillers currently in force, and their respective potential for neocollagenogenesis. Thus, we aim to elucidate the neocollagenesis potential of each of the non-permanent dermal fillers currently in force and then contribute concise data for association and optimization of results, with tissue regeneration and its regenerative aesthetic impact on patients. The objective of this integrative review is to concisely establish the biostimulatory effects by measuring the neocollagenesis potential of the main dermal fillers currently on the market – hyaluronic acid (HA), calcium hydroxyapatite (CaHA), poly-L-lactic acid (PLLA) and polycaprolactone (PCL) –, used to approach facial/body rejuvenation, in order to assist not only in medical decision-making, but also to provide impactful data for optimizing results, in the field of Regenerative Aesthetic Medicine.

Methods: This integrative review addressed a survey of review articles and clinical articles, involving the clinical experience of each of the main dermal fillers, using the PubMed-MEDLINE/PMC (National Library of Medicine) database, during November and December 2023, using the following terms as keywords: “Hyaluronic Acid; Collagen; Hydroxyapatite; Regenerative Medicine; Fillers; Rejuvenation”, with a publication time restriction of the period from 2013 to 2023.

Results: Neocollagenesis allows new collagen through the activation of fibroblasts or epithelial cells, through inflammatory or regenerative pathways. In the literature, there are comparative studies of the potential for collagenogenesis in mouse models and in human tissue biopsies. HA has a minimal and contradictory level of neocollagenogenesis, compared to PCL, PLLA and CaHA. Biostimulators with regenerative potential are less inflammatory and tend to be more promising, when inserted in the context of Regenerative Aesthetics, due to their potential for rejuvenation and local functional optimization.

Conclusions: Although several fillers induce neocollagenesis, the product must be selected based on the anatomical site and patient-specific soft tissue dynamics. There are differences between collagen stimulators, but no standardized clinical studies have been performed to date to broadly compare them. Regenerative Aesthetics is fascinating, but it still requires many studies involving tissue engineering work, to elucidate the inflammatory and neocollagenogenesis pathways, as well as optimize them and provide data that will allow doctors to select interventions with appropriate products.

References: AGUILERA SB, MCCARTHY A, KHALIFIAN S, LORENC ZP, GOLDIE K, CHERNOFF WG. The Role of Calcium Hydroxylapatite (Radiesse) as a Regenerative Aesthetic Treatment: A Narrative Review. *Aesthet Surg J*. 2023 Sep 14;43(10):1063-1090. doi: 10.1093/asj/sjad173. PMID: 37635437. CARRUTHERS JD, CARRUTHERS JA, HUMPHREY S. Fillers and neocollagenesis. *Dermatol Surg*. 2014 Dec;40 Suppl 12:S134-6. doi: 10.1097/DSS.0000000000000227. PMID: 25417563. CUNHA MG, ENGRACIA M, SOUZA LG, MACHADO FILHO CD. Biostimulators and their mechanisms of action. *Surg Cosmet Dermatol*. Rio de Janeiro v.12 n.2 abr-jun. 2020 p. 109-17. DOI: <http://www.dx.doi.org/10.5935/scd1984-8773.20201221424>. GOLDIE K. The evolving field of regenerative aesthetics. *J Cosmet Dermatol*. 2023 Mar;22 Suppl 1:1-7. doi: 10.1111/jocd.15556. PMID: 36988470. HADDAD S, GALADARI H, PATIL A, GOLDUST M, AL SALAM S, GUIDA S. Evaluation of the biostimulatory effects and the level of neocollagenesis of dermal fillers: a review. *Int J Dermatol*. 2022 Oct;61(10):1284-1288. doi: 10.1111/ijd.16229. Epub 2022 Apr 29. PMID: 35486036. HUANG LLH, CHEN YA, ZHUO ZY, HSIEH YT, YANG CL, CHEN WT, LIN JY, LIN YX, JIANG JT, ZHUANG CH, WANG YC, NGUYENDAC H, LIN KW, LIU WL. Medical Applications of Collagen and Hyaluronan in Regenerative Medicine. *Adv Exp Med Biol*. 2018;1077:285-306. doi: 10.1007/978-981-13-0947-2_15. PMID: 30357694. KADOUCHE JA. Calcium hydroxylapatite: A review on safety and complications. *J Cosmet Dermatol*. 2017 Jun;16(2):152-161. doi: 10.1111/jocd.12326. Epub 2017 Mar 1. PMID: 28247924. MAZZUCO R, EVANGELISTA C, GOBBATO DO, DE ALMEIDA LM. Clinical and histological comparative outcomes after injections of poly-L-lactic acid and calcium hydroxyapatite in arms: A split side study. *J Cosmet Dermatol*. 2022 Dec;21(12):6727-6733. doi: 10.1111/jocd.15356. Epub 2022 Sep 20. PMID: 36098704. NOWAG B, SCHÄFER D, HENGL T, CORDUFF N, GOLDIE K. Biostimulating fillers and induction of inflammatory pathways: A preclinical investigation of macrophage response to calcium hydroxylapatite and poly-L lactic acid. *J Cosmet Dermatol*. 2023 Aug 18. doi: 10.1111/jocd.15928. Epub ahead of print. PMID: 37593832. ZARBAFIAN M, FABI SG, DAYAN S, GOLDIE K. The Emerging Field of Regenerative Aesthetics-Where We Are Now. *Dermatol Surg*. 2022 Jan 1;48(1):101-108. doi: 10.1097/DSS.0000000000003239. PMID: 34904577.

Submitter
Hidajat Inneke Jane
innejane@gmail.com - Indonesia

Presenter
Hidajat Inneke
innejane@gmail.com - Indonesia

#8494

The Role of Hyaluronic Acid and Succinic Acid Combination Injection in Melasma: A Case Series

41 - Pigmentation

Hidajat I¹

¹Faculty of Medicine and Health Sciences, Atma Jaya Catholic University of Indonesia, Jakarta, Indonesia

Background/Objectives: Melasma is a common disfiguring condition involving acquired hyperpigmentation especially on the face, for which the pathogenesis is still uncertain. The latest theory regarding the pathogenesis of melasma is that it is part of the ageing process caused by ultraviolet (UV) radiation or photoaging. Nowadays, skin booster injection containing hyaluronic acid (HA) has become one of the most popular ways to correct skin ageing. Succinic acid (SA) has metal chelating potential with particular affinity to copper. The chelation of the copper in the tyrosinase results in blocking its enzymatic activity and complete enzyme function loss. Given the facts that melasma is one of ageing skin disorder, this regimen might be beneficial for treating melasma. Here we report the safety and efficacy of skin booster containing HA and SA combination in treating melasma.

Methods: A series of melasma cases treated with hyaluronic acid 18 mg/ml and succinic acid 16 mg/ml combination (HA/SA) injections in the whole face area. Procedures were done in 3 sessions with 2 weeks interval between sessions. The result was observed after 2 and 4 weeks after the last session. Objective improvement assessment was performed by comparing before and after treatment pictures using Physician's Global Assessment Scores (PGAS), meanwhile subjective evaluation was performed using a questionnaire.

Results: In this case series, all of the patients reported satisfactory improvement in their melasma. The PGAS score also showed more than 50% improvement of the melasma lesions. Beside the pigmentation improvement, the subjects also gave 3-4 scores to the improvement of their skin moisture, firmness, and glow. No significant adverse effects were reported from the use of HA/SA injection.

Conclusions: From these case series, we found that injection of skin booster containing HA/SA combination is a safe and effective therapy for melasma as well as other aging skin problems.

References:1. Turkevych A, Derkach N, Kupriyanova A, Zubair L, Turkevych M, Turkevych D. Improving skin quality with hyaluronic acid and succinic acid. *Int J aesthetic anti-ageing Med.* 2020;10(1):36-43. 2. Sister D. Combination injectable treatments to rejuvenate the ageing face. *Int J aesthetic anti-ageing Med.* 2017;7(4):18-23. 3. Murniastuti DS, Etnawati K, Pudjiati SR. The correlation between severity of melasma with facial wrinkles in yogyakarta, indonesia. *Dermatology Reports.* 2020;12:8390. 4. Passeron T, Picardo M. Melasma, a photoaging disorder. *Pigment Cell Melanoma Res.* 2018;31(4):461-465. 5. Hidajat IJ, Veronica. Novel treatment of melasma patients with oral tranexamic acid: a case series. In: *Old Skin Diseases in the New Era, What We Need to Know? Current Insights and Novel Treatments.* ; 2020:225-230. 6. Ceccarelli M. Treating hyperpigmentation using a combination of hyaluronic and succinic acids. *Int J aesthetic anti-ageing Med.* 2016;4(4). 7. Mikami M, Sonoki T, Ito M, Funasaka Y, Suzuki T, Katagata Y. Glycosylation of tyrosinase is a determinant of melanin production in cultured melanoma cells. *Mol Med Rep.* 2013;8(3):818-822. 8. D'Mello SA, Finlay GJ, Baguley BC, Askarian-Amiri ME. Signaling pathways in melanogenesis. *Int J Mol Sci.* 2016;17:1144. 9. Mia R. Combining HA with Sodium Succinate. *Aesthetics.* 2016;3(8). 10. El-Rahi J. The role of hyalual injections in eyelid rejuvenation. *Int J aesthetic anti-ageing Med.* 2018;8(5):12-16.

Submitter
Hidajat Inneke Jane
innejane@gmail.com - Indonesia

Presenter
Hidajat Inneke
innejane@gmail.com -

#8495

Advancements in Picosecond Laser Technology for Scar Revision in Asian Skin Types: Efficacy and Considerations

42 - Scars & acne

Hidajat I

Background/Objectives: This presentation explores the efficacy and nuances of picosecond laser technology in scar revision specifically tailored for Asian skin types. Scars, whether from acne, trauma, or surgical procedures, pose significant challenges due to the melanin-rich nature of Asian skin, which increases the risk of hyperpigmentation and hypopigmentation with traditional laser treatments. Picosecond lasers, with their ultrashort pulse durations, offer a promising solution by targeting scar tissue while minimizing thermal damage to surrounding tissues. Key points of discussion include the mechanisms of picosecond lasers in scar remodeling, clinical outcomes in Asian populations, and considerations for optimizing treatment protocols to achieve superior aesthetic outcomes. The presentation will also address safety profiles, patient selection criteria, and comparative effectiveness against other scar revision modalities. By elucidating the advancements and practical considerations of picosecond lasers in scar revision for Asian skin types, this presentation aims to equip dermatologists and aesthetic practitioners with evidence-based insights to enhance clinical practice and patient satisfaction.

Submitter
Yoon Ho-joon
hojoonyoonmd@gmail.com - South Korea

Presenter
Hojoon Yoon
hojoonyoonmd@gmail.com -

#8496

Treatment of lower eyelid bags with laser blepharoplasty and fat repositioning by removed fat

56 - Minimally invasive surgery / Minimally invasive advances

Hojoon Y

Background/Objectives: Lower eyelid bags are considered a sign of aging, and they make people look tired, angry and old. The transconjunctival laser blepharoplasty of lower eyelids is very effective method to remove lower eyelid bags and has lower surgical complications. But there are some complications such as deepening of wrinkles and sunken eyes. This study was conducted to determine the effectiveness of transconjunctival carbon dioxide laser blepharoplasty and fat repositioning by removed fat transplantation in treating lower eyelid bags.

Methods: We compared the results and satisfaction of the patients treated by conventional transconjunctival laser blepharoplasty of lower eyelids and by transconjunctival carbon dioxide laser blepharoplasty and fat repositioning by removed fat transplantation

Results: Transconjunctival carbon dioxide laser blepharoplasty and fat repositioning by removed fat transplantation prevents sunken eye appeared in cases of too much fat removal and reduces the degree of wrinkles occurred after transconjunctival carbon dioxide laser blepharoplasty. It had also the advantage of the fat transplantation on the tear trough area and improved the degree of a dark circle.

Conclusions: Transconjunctival carbon dioxide laser blepharoplasty and fat repositioning by removed fat transplantation is more effective and satisfactory treatment method in comparison with conventional transconjunctival laser blepharoplasty of lower eyelids.

Submitter
Shah Falguni
radianceskinclinic@live.in - India

Presenter
Shah Dr Falguni
radianceskinclinic@live.in - India

#8503

Adipose Tissue Regeneration for Skin Rejuvenation

51 - Regenerative aesthetics

Shah D¹

¹Radiance Skin Clinic, Mumbai, India

Background/Objectives: Age related morphological changes in the skin such as wrinkles, fat and bone resorption and skin dehydration are because of loss of elasticity and volume. Replacing the volume with fillers or fat, was the absolute certain way to deal with this, up until now. However, the limitation of fat transfer (as fat was giving volume but not elasticity) and the not so aesthetically accepted appearance post fillers or the current desire for 'natural appearances', has opened the doors for 'biostimulators' to achieve a youthful appearance. These stimulators improve the fibroblast function and skin elasticity.

Submitter
Shah Falguni
radianceskinclinic@live.in - India

Presenter
Shah Dr Falguni
radianceskinclinic@live.in - India

#8504

Neck and Shoulder Sliming techniques

43 - Anatomy related to non-or minimally invasive approaches

Shah D

Background/Objectives: Objective: Deliberate and demonstrate how I have been using the molecules and procedures at our disposal as practicing dermatologists, to help achieve a slim and slender neck & shoulder for my patients. Introduction: We all would agree that one of the key dimensions of beauty is a 'Slim & Slender Neck'. Though I believe that focusing only on Neck is not enough, for a more complete outcome, we need to also treat the Shoulder which would add overall aesthetic value to a Slim Neck. There are ways and methods suggested by dietitians, physiotherapists, and gym instructors to achieve a slim Neck. Though it's easier said than done. Today with advancement of Aesthetic medicine, we have at our disposal molecules and procedures that can help achieve a slim and slender neck for our patients.

Submitter
Shah Falguni
radianceskinclinic@live.in - India

Presenter
Shah Dr Falguni
radianceskinclinic@live.in - India

#8505

Basics of Lasers

49 - Lasers, EBDs & Light

Shah D¹

¹Radiance Skin Clinic, Mumbai, India

Background/Objectives: Lasers form an integral part of all our practices, and I remember buying my first laser where I blindly followed the company representatives. Only later did I realize the need to understand the basics and physics of lasers at large. Understanding the fundamentals and principles give us a better understanding of the functioning and upkeep of the device.

Submitter
Shah Falguni
radianceskinclinic@live.in - India

Presenter
Shah Dr Falguni
radianceskinclinic@live.in - India

#8506

Polynucleotides a potent BioStimulator

51 - Regenerative aesthetics

Shah D¹

¹Radiance Skin Clinic, Mumbai, India

Background/Objectives: What are polynucleotides? What is their role as a biostimulator? How do you use them? Are they worth the hype? So many questions we have while introducing a new molecule in our practice. In my practice I have seen that polynucleotides improve the skin tone and delivers deep hydration, giving the skin an antioxidant and moisturizing effect. Being a messenger, RNA (mRNA) that sends signals to our skin cells, it helps in boosting collagen and elasticity.

Submitter
Njoo David
davidnjoo@gmail.com - Netherlands

Presenter
Njoo David
davidnjoo@gmail.com -

#8508

Cutaneous comorbidities in melasma : A retrospective study of 23 patients visiting a melasma clinic in central Netherlands

41 - Pigmentation

Njoo D

Background/Objectives: The prevalence of melasma is increasing worldwide. Whilst previous studies mention a global prevalence of 1 %, more recent studies show that its true prevalence probably approximates between 9 and 50%. A recent internet study reveals that the interest in searching for information with the keyword “melasma” is increasing globally, indicating a rise of its prevalence. A greater increase in melasma searches was found in countries with greater solar exposure, oral contraceptive use and air pollution. Closely related to this phenomenon is our observation that the clinical presentation of melasma in the past 2-3 decades has deviated from its classical subtypes, i.e centrofacial, malar and submandibular subtypes. More frequently melasma is observed together with a second, third or even a fourth dermatosis. These cutaneous comorbidities are probably the result of an increased use of cosmeceutical products, an increased use of cutaneous treatments against melasma and skin aging and an increased exposure to natural and artificial ultraviolet rays. This is a retrospective clinical study of 23 consecutive patients from our database. The results of our analysis reflect that melasma may not always be a self-standing unifying diagnosis. Often, additional diagnostics and/ or targeted therapies should be adapted when necessary.

Methods: see above

Results: see above

Conclusions: see above

Submitter
Quân Nguyễn
bsnguyenduyquan@gmail.com - Vietnam

Presenter
Nguyen Ngoc Khoi
khoingocnguyen@gmail.com -

#8509

How to develop a dermatology clinic based on community activities – 7 years experience.

73 - Marketing & Practice management

Nguyen N

Background/Objectives: In the past 20 years, the number of dermatology clinic in Vietnam has an excessive increase. We built our dermatology clinic in this period and found it many difficulties. Beside investment on modern equipments and high quality of doctors, we launched a community programe which was called “erase nevus, draw future”. We announced on our website and fanpage about a program to treat for poverty with dark, white and red nevus. Most of our patients were 20-30 years old and were lack of employment opportunities due to their birthmark on face or neck. The programe first aimed to give people a chance to have good job and improve their quality of life. However, many other positive effects followed the programe were noted. People with birthmark who were treated in the program become a marketer for our clinic, they introduced our mordern technique to their family members and friends. Government also supports our clinic because of our community activities. Up to now, most of our customers were introduced by the patients who get benefit from our communitiy programe.

Submitter
Decangchon Francis
decangchonfrancis@yahoo.com - Philippines

Presenter
Decangchon Francis
decangchonfrancis@yahoo.com -

#8510

“NON-SURGICAL THREAD RHINOPASTY : TIPS AND TRICKS TO OPTIMIZE SAFETY AND ACHIEVE BETTER RESULTS IN ASIAN PATIENTS”

46 - Threads

Decangchon F

Background/Objectives: Rhinoplasty for the Asian patient mandates an entirely different strategy than for the Occidental nose. Cosmetic enhancement of the Asian nose requires a unique philosophical approach and strategy in comparison with those necessary for Western rhinoplasty. Compared with Caucasians, Asians generally have a shorter, wider, and less projected nose. Whereas reduction rhinoplasty with dorsal hump reduction and some form of lower lateral cartilage reduction is more popular in Caucasians, augmentation rhinoplasty is most frequently performed in Asian patients. Asians have facial features that differ from those of Caucasians, and techniques have evolved to produce natural-looking Asian rhinoplasty results. What may work well for Caucasian patients may not necessarily be appropriate for those from an Asian background when the goal is to produce natural-looking results. My presentation will focus on both the cultural underpinnings that are mandatory in approaching the Asian patient as well as techniques that can lead to a greater degree of consistency in aesthetic results for the Asian nose. The technique is designed to reshape the nose so that it appears in harmony with Asian facial features. It is commonly requested to address an ill-defined nasal dorsum or an undefined nasal tip. Other patients may be unhappy with the size or shape of their nostrils. Asian nose reshaping can significantly enhance the contour of the nose in both the upper and lower parts. The nose tip and nostril shape can also be enhanced to produce highly desirable Asian nose results. The objective for Asian rhinoplasty is augmentation rather than reduction in which the dorsum is raised and the nasal tip projection and definition are enhanced. Tips and tricks to achieve better results and outcomes especially lengthening the nose, elevating the nasal dorsum with a straighter profile, enhancing nasal definition, strengthening and reinforcing the columella to produce a stronger nasal tip, minimizing the dilated nostrils and alar openings will be demonstrated.

Submitter
Cho Byong Seung
ceo@exocobio.com - South Korea

Presenter
Byong Seung Cho
ceo@exocobio.com - South Korea

#8513

Adipose tissue-derived mesenchymal stem cell-derived exosomes alleviate particulate matter-induced inflammatory response and skin barrier damage in atopic dermatitis-like triple-cell model

51 - Regenerative aesthetics

Byong Seung C¹

¹ExoCoBio Inc., Seoul, South Korea

Background/Objectives: Particulate matter (PM) has been reported to cause inflammation in various skin diseases. Also recently, PM has been shown to exacerbate atopic dermatitis (AD) by inducing an inflammatory response. Meanwhile, several studies revealed that exosomes derived from adipose tissue-derived mesenchymal stem cells promote wound healing and alleviate inflammation via their regenerative and immunomodulatory capacities. Our study aimed to investigate the effects of human adipose tissue-derived mesenchymal stem cell-derived (ASC-EXOs) in PM-induced AD. An AD-like triple-cell model was established by treating human keratinocytes, dermal fibroblasts, and mast cells with polyinosinic:polycytidylic acid (Poly I:C) and interleukin 1 alpha (IL-1a).

Methods: An AD-like triple-cell model was established through Poly I:C and IL-1a treatment of triple-cells model (Keratinocyte, dermal fibroblast, and mast cell). Cells were pretreated with Poly I:C and IL-1a for 24 hours, followed by treatment with ASC-exosomes and PM (25 µg/cm²) for 24 and 48 hours. qPCR was used to analyze the mRNA expression levels of proinflammatory cytokines such as IL-10, IL-6, IL-1β, IL-1a, and skin barrier-related genes loricrin, and filaggrin. Western blotting and immunofluorescence analysis was confirmed to evaluate the effect of PM and ASC-exosomes on the protein expression of pro-inflammatory cytokines and a skin barrier protein.

Results: The effects of PM and ASC-exosomes on the expression of pro-inflammatory cytokines and skin barrier proteins were examined using quantitative real-time polymerase chain reaction, western blotting, and immunofluorescence. PM increased pro-inflammatory cytokines (IL-6, IL-1β, and IL-1a) and decreased the anti-inflammatory cytokine IL-10, while the mRNA expression of skin barrier proteins (loricrin and filaggrin) decreased. However, when the cells were treated with ASC-exosomes, the PM-induced effects on pro-inflammatory cytokines and skin barrier proteins were reversed.

Conclusions: ASC-exosomes are expected to present a new paradigm for treating the fundamental causes of AD as a single drug or through combination therapy with existing treatments. ASC-exosomes may, therefore, improve the efficacy of existing therapies against inflammation, skin barrier damage, and itching. Our results confirm that PM-exacerbated inflammation and skin barrier damage were alleviated by ASC-exosomes using an AD-like triple-cell model. These findings will aid in discovering potential therapeutic targets using ASC-exosomes in AD; however, further research is needed to elucidate the precise mechanisms of ASC-exosome treatment in AD and to investigate the in vivo effects using animal models and clinical studies.

References: Roh YJ, Choi YH, Shin SH, Lee MK, Won YJ, Lee JH, Cho BS, Park KY, Seo SJ. (2024) Adipose tissue-derived exosomes alleviate particulate matter-induced inflammatory response and skin barrier damage in atopic dermatitis-like triple-cell model. *PLoS One*. 19(1):e0292050. Roh YJ, Noh HH, Koo NY, Shin SH, Lee MK, Park KY, et al. (2022) Development of In Vitro Co-Culture Model to Mimic the Cell to Cell Communication in Response to Urban PM_{2.5}. *Ann Dermatol*. 34(2):110-7. Cho BS, Kim JO, Ha DH, et al. (2018) Exosomes derived from human adipose tissue-derived mesenchymal stem cells alleviate atopic dermatitis. *Stem Cell Res Ther*. 9(1):187. Shin KO, Ha DH, Kim JO, et al. (2020) Exosomes from human adipose Tissue-Derived mesenchymal stem cells promote epidermal barrier repair by inducing de novo synthesis of ceramides in atopic dermatitis. *Cells*. 9(3):680.

Submitter
Cho Byong Seung
ceo@exocobio.com - South Korea

Presenter
Byong Seung Cho
ceo@exocobio.com - South Korea

#8514

Exosomes derived from adipose tissue-derived mesenchymal stem cells (ASCE) for the treatment of dupilumab-related facial redness in patients with atopic dermatitis

51 - Regenerative aesthetics

Byong Seung C¹

¹ExoCoBio Inc., Seoul, South Korea

Background/Objectives: Atopic dermatitis (AD) is a chronic, pruritic, and inflammatory dermatosis affecting approximately 20% of children and 10% of adults worldwide. Dupilumab facial redness (DFR) is gaining attention as additional cases are coming to light in the medical literature. Recent studies have reported promising results of exosomes for skin aging. Exosomes are nano-sized (30 - 200 nm in diameter) lipid bilayered vesicles secreted by most cell types. Adipose stem cell exosomes (ASCE) are emerging as effective cell-free therapeutic agents to treat a variety of skin aging.

Methods: Twenty patients on dupilumab for AD and diagnosed with DFR were enrolled in a 12-week prospective clinical study. Investigated whether topical application of adipose stem cell exosomes could reduce dupilumab facial redness in patients. ASCE were applied to each entire face of patients and prism sonophoresis for effective delivery. This topical application of exosomes was performed weekly for five consecutive weeks.

Results: The average investigator global assessment (IGA) and clinical erythema assessment (CEA) scores significantly decreased from week 2 until week 12. Skin erythema was measured at the forehead, chin, and right and left cheek. Erythema index (EI) decreased in all four areas after ASCE treatment from week 4. Skin hydration was increased and TEWL was decreased after ASCE treatment at four different anatomical areas. The mRNA expression of IL-1 α was significantly decreased in stratum corneum samples, while FLG (filaggrin) and VEGF (vascular endothelial growth factor) were significantly increased.

Conclusions: ASCE downregulated inflammation and increased skin barrier-related proteins and angiogenesis. In addition, ASCE can result in a therapeutic effect by topical application which is effective for DFR manifests since DFR is localized skin lesions. Thus, Adipose stem cell exosomes may serve as effective management to treat dupilumab facial redness.

References: Cho BS, Kim JO, Ha DH, et al. Exosomes derived from human adipose tissue-derived mesenchymal stem cells alleviate atopic dermatitis. *Stem Cell Res Ther.* 2018;9(1):187. Shin KO, Ha DH, Kim JO, et al. Exosomes from human adipose Tissue-Derived mesenchymal stem cells promote epidermal barrier repair by inducing de novo synthesis of ceramides in atopic dermatitis. *Cells.* 2020;9(3):680. Park KY, Han HS, Park JW, et al. Exosomes derived from human adipose tissue-derived mesenchymal stem cells for the treatment of dupilumab-related facial redness in patients with atopic dermatitis: a report of two cases. *J Cosmet Dermatol.* 2022;21(2):844-849.

Submitter
Cho Byong Seung
ceo@exocobio.com - South Korea

Presenter
Byong Seung Cho
ceo@exocobio.com - South Korea

#8515

The Efficacy and Safety of Adipose Tissue Stem Cell Exosomes (ASCE) in the Androgenetic Alopecia based on the Translational Study including Preclinical and Clinical study

52 - Hair restoration

Byong Seung C¹

¹ExoCoBio Inc., Seoul, South Korea

Background/Objectives: Exosomes are nano-sized (30 - 200 nm in diameter) lipid bilayered vesicles secreted by most cell types. Adipose Stem Cell-derived Exosomes (ASCE) are emerging as a promising cell-free therapy for the treatment of hair loss and scalp rejuvenation. ASCE have been tested for in vitro, in vivo, & clinical studies to prove its efficacy for hair loss. To understand that adipose stem cell exosome (ASCE) can be a paradigm shift in regenerative aesthetics & therapeutics. To know that ASCE can make scalp rejuvenation and hair loss prevention.

Methods: ASC-Exosomes were isolated from the serum-free conditioned media by sequential filtration and characterized as recommended by the International Society for Extracellular Vesicles (ISEV). The effects of ASC-exosomes were demonstrated from a variety of in vivo, in vitro, & clinical studies against dermal papilla cells and human hair follicles, in order to show longer hairs and better hair bulb shape. In our clinical study, 29 subjects were treated with microneedling procedure with topical ASCE treatment for 6 months.

Results: ASCE labelled with green fluorescence were easily up-taken by human dermal papilla cells in vitro. ASCE could reduce by up to 20% the level of cellular aging of human dermal papilla cells from UVB irradiation in vitro. ASCE could effectively increase by 10-20 % the length and thickness of human hairs derived from ex vivo human hair follicles for 8 days, which was superior to minoxidil. Our microneedling-based clinical study showed 9 more hair counts per 1cm², from baseline 180 to 189 after 6 months of 10 sessions. A ASCE-containing formulation showed strong improvement in clinical cases of androgenic alopecia, alopecia areata, seborrheic dermatitis, & hair transplantation. A ASCE-containing formulation showed the maintenance of the shape of human hair follicles from an ex-vivo study.

Conclusions: ASCE may serve as next generation technology in terms of regeneration and anti-inflammation for scalp and hair.

Submitter
Cho Byong Seung
ceo@exocobio.com - South Korea

Presenter
Byong Seung Cho
ceo@exocobio.com - South Korea

#8516

Efficacy of combined treatment with adipose tissue stem cell exosomes (ASCE) and microneedling for facial skin aging: a 12-week prospective, randomized, split-face study

51 - Regenerative aesthetics

Byong Seung C¹

¹ExoCoBio Inc., Seoul, South Korea

Background/Objectives: Recent studies have reported promising results of mesenchymal stem cell therapies for skin aging. However, in the use of mesenchymal stem cells, some drawbacks including rarely possible tumorigenicity and immunogenicity, and low engraftment rates have limited their widespread clinical use. Exosomes are nano-sized (30 - 200 nm in diameter) lipid bilayered vesicles secreted by most cell types. Adipose stem cell exosomes (ASCEs) are emerging as effective cell-free therapeutic agents to treat a variety of skin aging. We evaluated the clinical efficacy of combining human ASCE application with microneedling to treat facial skin aging.

Methods: ASCE were isolated from the serum-free conditioned media by sequential filtration and characterized as recommended by the International Society for Extracellular Vesicles (ISEV). The effects of ASCE were demonstrated from a variety of in vivo & in vitro studies against dermal fibroblasts and others. A 12-week, prospective, randomized, split-face, comparative study was conducted. Twenty-eight individuals underwent three treatment sessions separated by 3-week intervals and were followed up for 6 weeks after the last session. At each treatment session, ASCEs were administered to one side of the face, and normal saline solution was administered to the other side as a placebo, followed by the microneedling application to both sides of the face.

Results: The Global Aesthetic Improvement Scale score was significantly higher on the ASCE-treated side than on the control side at the final follow-up visit ($p = 0.005$). The difference between the two treatments was not significant at week 3 ($p = 0.202$). But, it became statistically significant at week 6 ($p = 0.023$). At the final follow-up visit (week 12), 13 cases (46%) had a GAIS score of 3, 4 cases (14%) scored 4, and 4 cases (14%) scored 5 for the ASCE side; whereas 13 cases (46%) scored 3, 2 cases (7%) scored 4, and 2 cases (7%) scored 5 for the control side. These results indicate that the ASCE side exhibited a significantly greater improvement in facial skin aging than the control side at the final follow-up visit ($p = 0.005$). Objective measurements obtained by different devices confirmed greater clinical improvements in skin wrinkles, elasticity, hydration, and pigmentation on the ASCE-treated side than on the control side. The results of the histopathological evaluation were consistent with the clinical findings. No serious adverse events were observed.

Conclusions: These findings demonstrate that combined treatment using ASCEs and microneedling is effective and safe for treating facial skin aging.

References: Kwon HH, Yang SH, Lee J, Park BC, Park KY, Jung JY, Bae Y, Park GH. (2020) Combination Treatment with Human Adipose Tissue Stem Cell-derived Exosomes and Fractional CO₂ Laser for Acne Scars: A 12-week Prospective, Double-blind, Randomized, Split-face Study. Acta Derm Venereol. 100(18):adv00310.

Submitter
Cho Byong Seung
ceo@exocobio.com - South Korea

Presenter
Byong Seung Cho
ceo@exocobio.com - South Korea

#8517

Biological Functions of Exosome-like Nanoparticles Isolated from Rose (*Rosa damascena*) Stem Cell Culture (RSCE)

51 - Regenerative aesthetics

Byong Seung C¹

¹ExoCoBio Inc., Seoul, South Korea

Background/Objectives: Rose has been one of the most popular plants in human history. Also, rose extracts have been used as cosmetic ingredients for a long time. However, there has been little scientific discovery on plant-derived extracellular vesicles (EV) contained in those extracts or culture media so far. Here, we first isolated exosome-like nanoparticles (RSCE) derived from rose stem cell (Callus) culture media by our proprietary EV isolation technology, ExoSCRTTM. Second, we characterized and profiled RSCEs to show that RSCE have multiple biological effects on the skin. To isolate and analyze the characteristics of exosome-like nanoparticles derived from a plant (Rose) stem cell culture supernatant (RSCE). To understand that RSCE has multiple biological effects such as cell migration, cell proliferation, collagen synthesis, inhibition of melanin, and anti-inflammation that can be applied to skin regenerative aesthetics

Methods: RSC culture was done to produce the supernatant and then exosome-like particles were isolated using the ExoSCRT tangential flow filtration (TFF) method. RSC Exosomes were applied to in vitro assay models such as cellular uptake, collagen synthesis, scratch-wound, cell viability, anti-inflammation, and melanin synthesis. In addition, the contents of RSCE were analyzed through protein and miRNA profiling.

Results: Rose stem cell exosomes (RSCE) were obtained by separating and refining RSC culture supernatant. The physical characteristics of the lipid membrane and the sizes of 30-200 nanometers were confirmed through Nano Tracking Analysis (NTA) and Transmission Electron Microscope (TEM). LC-MS/MS based proteomics analysis revealed that RSCE has a total of 206 peptides identified, including likely cytosolic and membrane proteins. miRNA analysis revealed that RSCE have more than 1,000 kinds of miRNA and only about 30 kinds of them have been matched to human-derived miRNA sequences. Most of them are related to housekeeping functions. The dominating microRNAs in the exosomes were of the Let-7 family. The RSCEs were found to be non-toxic on human dermal papilla cells (DPC), whereas a high concentration of the crude supernatant induced widespread cell death. Further, the RSCE could increase the collagen production of human dermal fibroblast (HDF) by 40-120% in a dose-dependent manner and promote the HDF migration assay in vitro by more than 20%. RSCE inhibited melanin production within cultured melanocyte by 60-80%, depending on its concentration. RSCE was found to have an anti-inflammatory function the IL-6 production of macrophages stimulated by LPS was also reduced to 50-60%, depending on its concentration.

Conclusions: These data collectively show that RSC in culture-released RSCE that contain microRNA and proteins have multiple biological functions in skin-related assays such as fibroblast growth and melanin content in melanocytes. Combined with the anti-inflammatory function of the RSCE, we suggest that they have appropriate features to be useful in aesthetic medicine for improving skin quality. It was discovered for the first time that RSCE have unique as well as similar properties to human stem cell exosomes and can be useful in aesthetic use for skin quality improvement.

Submitter
Cho Byong Seung
ceo@exocobio.com - South Korea

Presenter
Byong Seung Cho
ceo@exocobio.com - South Korea

#8518

Adipose Stem Cell Exosome (ASCE): Next Generation Regenerative Aesthetics & Therapeutics for Skin & Hair

42 - Scars & acne

Byong Seung C¹

¹ExoCoBio Inc., Seoul, South Korea

Background/Objectives: Exosomes, nano-sized extracellular vesicles, are the most important mediator for intercellular communication. For last years, the dual function of skin regeneration and anti-inflammation of ASCE has been well known from a number of research. These days, ASCEs are being developed as next generation regenerative therapeutics and aesthetics as well. From our various studies, it has been shown that ASCE can be an innovative biomaterial as regenerative therapeutics as well as regenerative aesthetics for treatment of atopic dermatitis, acne scar, facial redness, & scalp rejuvenation/hair loss.

Methods: Human adipose mesenchymal stem cell-derived exosomes (ASCE) and a specific formulation including ASCE were applied or treated for a variety of in vitro, in vivo, & clinical studies

Results: ASCE could reduce or modulate over-reactive inflammation in skin in atopic dermatitis model. The AD score was significantly improved and major proinflammatory cytokines including IL-4, IL-13, TLSP, & others were down-regulated. ASCE could promote the de novo synthesis of ceramide and dihydroceramide, key lipid molecules in skin barrier formation, which led to the significant improvement of atopic dermatitis model. ASCE showed strong anti-particulate matter effect by 1) promoting the synthesis of filaggrin and loricrin, 2) reversing the level of proinflammatory IL-6 and IL-1b in a co-culture model of 3 types of cells of fibroblasts, keratinocytes, and mast cells. In combination of CO2 fractional laser procedure, ASCE could synergistically show the improvement of acne scar which was the world's first double blinded clinical study in exosome field. From 2 patient case study, it was shown for the first time that topical application of ASCE by electroporation could successfully improve refractory DFR. An ASCE-based specific formulation could successfully improve the results in terms of rejuvenating the scalp and reducing hair loss.

Conclusions: ASCE may serve as a next generation technology in terms of regeneration and anti-inflammation.

References: Kwon HH, Yang SH, Lee J, Park BC, Park KY, Jung JY, Bae Y, Park GH. (2020) Combination Treatment with Human Adipose Tissue Stem Cell-derived Exosomes and Fractional CO2 Laser for Acne Scars: A 12-week Prospective, Double-blind, Randomized, Split-face Study. *Acta Derm Venereol.* 100(18):adv00310. Park KY, Han HS, Park JW, Kwon HH, Park GH, Seo SJ. (2022) Exosomes derived from human adipose tissue-derived mesenchymal stem cells for the treatment of dupilumab-related facial redness in patients with atopic dermatitis: A report of two cases. *J Cosmet Dermatol.* 21(2):844-849. Cho BS, Kim JO, Ha DH, et al. (2018) Exosomes derived from human adipose tissue-derived mesenchymal stem cells alleviate atopic dermatitis. *Stem Cell Res Ther.* 9(1):187. Shin KO, Ha DH, Kim JO, et al. (2020) Exosomes from human adipose Tissue-Derived mesenchymal stem cells promote epidermal barrier repair by inducing de novo synthesis of ceramides in atopic dermatitis. *Cells.* 9(3):680.

Submitter
Cho Byong Seung
ceo@exocobio.com - South Korea

Presenter
Byong Seung Cho
ceo@exocobio.com - South Korea

#8519

Adipose Tissue-Derived Mesenchymal Stem Cell-Derived Exosomes Promote Wound Healing and Tissue Regeneration

51 - Regenerative aesthetics

Byong Seung C¹

¹ExoCoBio Inc., Seoul, South Korea

Background/Objectives: Wound healing is a complex process involving cell proliferation, migration, and extracellular matrix (ECM) remodeling. Extracellular vesicles (EVs) or exosomes derived from adipose tissue-derived stem cells (ASCs) are emerging as promising alternatives to cell therapy for advanced wound healing. Hyaluronic acid (HA), a major component of the skin ECM, is widely utilized in wound dressings and dermal fillers. This study aimed to investigate the effects of ASC-derived exosomes (ASC-EXOs) on human dermal fibroblasts (HDFs) and their potential combination with HA in in vivo wound healing and dermal filler models.

Methods: In vitro evaluation of ASC-EXOs was conducted in HDFs to assess their potential effects on cell proliferation, migration, and ECM remodeling. HDF proliferation assay revealed not only cell proliferation but also skin-related α -SMA, FGF2, and elastin expression levels. In a porcine wound healing model, topical treatment with a combination of HA and ASC-EXOs group or HA alone. Analysis of wound closure rates, histological analysis of re-epithelialization and collagen type III. In a mouse dermal filler model, the combination of HA and ASC-EXOs or HA alone was S.C injected into four dorsal sites of SKH1-hairless mice, and, after 3 weeks, the tissues surrounding the transplanted grafts were collected for histological analysis. Comparative analysis of the occurrence of vascularization and fibroblast infiltration, and the content of collagen III and collagen fiber in skin tissue.

Results: The scratch-wound assay revealed that ASC-EXOs promoted the migration of HDFs. ASC-EXOs also induced the upregulation of mRNA expression levels of genes encoding collagen, α -SMA, FGF2. In a porcine wound healing model, topical treatment with a combination of HA and ASC-EXOs led to higher wound closure rates compared to HA alone. Histological examination showed increased re-epithelialization and collagen type III. In a mouse dermal filler model, tissues injected with the combination of HA and ASC-EXOs exhibited thicker tissue layers, increased vascularization, enhanced infiltration of myofibroblasts, and higher levels of collagen III and collagen fiber content compared to HA alone.

Conclusions: These results provide important insights into the potential therapeutic and cosmetic applications of ASC-EXOs in wound healing and tissue regeneration. Overall, the findings from this study suggest that ASC-EXOs, alone or in combination with HA, have the potential to be used as a novel therapeutic approach for wound healing and tissue regeneration in various clinical applications.

References: Lee, J.H.; Won, Y.J.; Kim, H.; Choi, M.; Lee, E.; Ryou, B.; Lee, S.G.; Cho, B.S. (2023) Adipose Tissue-Derived Mesenchymal Stem Cell-Derived Exosomes Promote Wound Healing and Tissue Regeneration. *Int. J. Mol. Sci.* 24, 10434. Lee, J.H.; Ha, D.H.; Go, H.K.; Youn, J.; Kim, H.K.; Jin, R.C.; Miller, R.B.; Kim, D.H.; Cho, B.S.; Yi, Y.W. (2020) Reproducible Large-Scale Isolation of Exosomes from Adipose Tissue-Derived Mesenchymal Stem/Stromal Cells and Their Application in Acute Kidney Injury. *Int. J. Mol. Sci.* 21, 4774. Cho, B.S.; Kim, J.O.; Ha, D.H.; et al. (2020) Exosomes derived from human adipose tissue-derived mesenchymal stem cells alleviate atopic dermatitis. *Stem Cell Res Ther.* 2018;9(1):187. Shin, K.O.; Ha, D.H.; Kim, J.O.; et al. Exosomes from human adipose Tissue-Derived mesenchymal stem cells promote epidermal barrier repair by inducing de novo synthesis of ceramides in atopic dermatitis. *Cells.* 9(3):680.

Submitter
Saenz, Iii Gilberto
austinaestheticpa@gmail.com - United States

Presenter
Saenz Iii Gilberto
austinaestheticpa@gmail.com -

#8522

Elevating Facial Harmony: Advanced Techniques and Safety in Liquid Rhinoplasty

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Saenz Iii G

Background/Objectives: Rhinoplasty has long been one of the most common and sought after facial surgical procedures for both functional and aesthetic purposes. However, with any surgical procedure comes some assumed risk, ranging from those associated with general anesthesia to downtime needed for appropriate healing to outcomes that may not always align with the patient's expectations. The purpose of this presentation or workshop would be to educate on the proper and safest techniques to perform a liquid rhinoplasty with Hyaluronic Acid dermal filler. Discussion of potential risks and complications would be included as well as how to best manage any complications that may arise.

Submitter
Pupo Dagne
dagnepupo@gmail.com - Spain

Presenter
Pupo Dagne
dagnepupo@dagnepupoclinic.com -

#8523

Metamorphosis of the Neck. Classification of systematic approach

45 - Combination treatments

Pupo D

Background/Objectives: Title : Metamorphosis of the Neck. Classification of systematic approach The aging process, genetics and lifestyle significantly affect the neck area, leading to common concerns such as sagging skin, wrinkles and neck bands. A systematic approach to evaluating and treating the neck is essential to achieve consistent facial rejuvenation. We present a structured method for aesthetic physicians, focusing on non-invasive treatments. The approach emphasizes precisely analyzing the lower part of the face and neck, considering factors such as skin elasticity, platysmatic bands, adiposity, and support of the lower third. By addressing these issues, professionals can develop effective treatment plans. The use of combined protocols, incorporating superficial, intermediate and deep level treatments, improves the precision and effectiveness of neck rejuvenation. Implementing a systematic approach and combining several non-invasive treatments allows for superior and long-lasting results. Highlighting the cylindrical nature of the neck and addressing it as a whole ensures a more effective and satisfying rejuvenation process for patients. A classification that brings together different criteria, a structured and systematic approach to the evaluation and treatment of the neck is vital to obtain optimal results for patients.

Submitter
Pupo Dagne
dagnepupo@gmail.com - Spain

Presenter
Pupo Dagne
dagnepupo@dagnepupoclinic.com -

#8524

Treatment of the upper third of the face with hyaluronic acid fillers: A novel integrated method based on a single entry point

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Pupo D

Background/Objectives: The upper third presents important aesthetic challenges, it is not only treated for aging but also for beautification, feminization and correction of asymmetries. Its structure includes alterations in the subcutaneous fat compartments, lowering of the eyebrows, volume deflation in the eyelids, decreased bitemporal width and formation of transverse and vertical wrinkles. Traditionally, the upper third has been relegated to treatment with botulinum toxin only. However, this segmented approach can lead to multiple entry points and increased risk of localized adverse events (AEs), such as bruising, swelling, tenderness, and pain. Hyaluronic acid (HA) fillers have become an important treatment modality for address these problems comprehensively. To mitigate these problems, an innovative technique has been developed that addresses the upper third as a unitary whole, using a single entry point. This comprehensive approach not only offers high patient satisfaction but also reduces consultation times and allows for a holistic facial treatment.

Submitter
Thulesen Jesper
d057010@dadlnet.dk - Denmark

Presenter
Thulesen Jesper
j.thulesen@dadlnet.dk - Denmark

#8525

Pick pointing the tricky cases in HA-filler complications

48 - Complications - avoidance and management

Thulesen J¹

¹Clinic Aesthetica, Copenhagen, Denmark

Background/Objectives: Complications following injections of HA-filler are usually mild and transient. Commonly, the aesthetic physician is typically confident and prepared to react promptly on irrational side events in order to diminish the consequences for the patient. However, the conditions with HA-filler related complications might not always follow the general pathway, and since there are no golden standard algorithms for treatment, conditions can become very complex and difficult to reverse/cure. This presentation will deliver a schematic overview of the HA-filler related complications and focus on the 'tricky conditions' with clear statements for diagnosing and treatment solutions that can serve as an important clinical guidance for the aesthetician in daily practice

Submitter
Thulesen Jesper
d057010@dadlnet.dk - Denmark

Presenter
Thulesen Jesper
j.thulesen@dadlnet.dk - Denmark

#8526

The periocular challenge for the aesthetic physician

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Thulesen J¹

¹Clinic Aesthetica, Copenhagen, Denmark

Background/Objectives: The periocular region is the part of the face that plays the most significant role in our social interactions as our 'window' to the world, since this part of the face is always exposed to others, and the one we tend to focus on when we interact socially. However, it is also the first to demonstrate signs of facial aging, and changes in this region lead many patients to the aesthetic clinics seeking for advice and treatment options. This presentation will focus on the periorbital anatomy, topographic age-related changes and the structural aetiology behind these changes in addition to the correct use of nomenclature. In particular, a solid knowledge of the intrinsic age-related changes by the aesthetic physician can be effectively used to target the treatment regimens to obtain the most optimal results aesthetically, but also in a prophylactic manner to reduce the impact of future facial aging signs.

Submitter
Ghasemi Shohreh
shooshoo_gh@yahoo.com - United States

Presenter
Ghasemi Shohreh
shooshoo_gh@yahoo.com -

#8527

Artificial Intelligence in Melanoma Prognosis: A Narrative Review

41 - Pigmentation

Ghasemi S

Background/Objectives: Melanoma is a complex disease with various clinical and histopathological features that impact prognosis and treatment decisions. Traditional methods of melanoma prognosis involve manual examination and interpretation of clinical and histopathological data by dermatologists and pathologists. However, the subjective nature of these assessments can lead to inter-observer variability and suboptimal prognostic accuracy. AI, with its ability to analyze vast amounts of data and identify patterns, has emerged as a promising tool for improving melanoma prognosis.

Methods: A comprehensive literature search was conducted to identify studies that employed AI techniques for melanoma prognosis. The search included databases such as PubMed and Google Scholar, using keywords such as "artificial intelligence," "melanoma," and "prognosis." Studies published between 2010 and 2023 were considered. The selected articles were critically reviewed, and relevant information was extracted.

Results: The review identified various AI methodologies utilized in melanoma prognosis, including machine learning algorithms, deep learning techniques, and computer vision. These techniques have been applied to diverse data sources, such as clinical images, dermoscopy images, histopathological slides, and genetic data. Studies have demonstrated the potential of AI in accurately predicting melanoma prognosis, including survival outcomes, recurrence risk, and response to therapy. AI-based prognostic models have shown comparable or even superior performance compared to traditional methods.

Conclusions: To overcome the current limitations, future research should focus on large-scale, multi-center studies with standardized data collection and validation. Integration of AI models into clinical decision support systems could enhance real-time prognosis and personalized treatment recommendations. Collaboration between dermatologists, pathologists, and AI experts is crucial for developing robust and reliable AI algorithms. Moreover, educating healthcare professionals about AI and fostering acceptance and trust in AI-based systems are essential for successful implementation.

References: N/A

Submitter
Josipovic Aleksandar
aj@thedarkink.com - Liechtenstein

Presenter
Josipovic Aleksandar
aj@thedarkink.com -

#8531

Revolutionizing Aesthetic Marketing Campaigns with Artificial Intelligence: A Case Study of Enhanced Strategy and Execution

73 - Marketing & Practice management

Josipovic A

Background/Objectives: Background: The aesthetic medicine industry is marked by intense competition and rapid technological advancements. Traditional marketing campaigns often struggle to effectively capture audience attention and drive engagement. This study explores the transformative potential of Artificial Intelligence (AI) in developing and executing innovative aesthetic marketing campaigns, showcasing its impact on campaign effectiveness and business growth. Objective: To evaluate the effectiveness of AI-driven strategies in enhancing the design, execution, and outcomes of aesthetic marketing campaigns, focusing on the integration of AI tools for content creation, audience targeting, and performance analytics.

Methods: Study Design: An observational case study analyzing the implementation of AI in various marketing campaigns for a leading aesthetic clinic over a 12-month period. Participants: Marketing data from campaigns promoting treatments such as RF microneedling, BodyTite, Morpheus8, and other non-invasive procedures. Intervention: Integration of AI tools for campaign design, personalized content creation, audience segmentation, and performance tracking. Outcomes Measured: Campaign reach, engagement metrics (e.g., impressions, click-through rates), conversion rates, return on investment (ROI), and overall impact on brand visibility.

Results: The AI-driven marketing campaigns achieved remarkable results: A 50% increase in campaign reach through precise audience targeting and segmentation. Enhanced engagement metrics, with a 65% improvement in impressions and a 70% increase in click-through rates. A 40% rise in conversion rates, demonstrating effective lead generation and follow-through. Significant ROI, with a 55% increase in revenue attributable to AI-optimized campaigns. Elevated brand visibility and recognition in the competitive aesthetic market.

Conclusions: AI-driven marketing strategies revolutionize the execution and effectiveness of aesthetic campaigns, offering a powerful tool for enhancing reach, engagement, and conversion rates. This case study illustrates the substantial benefits of integrating AI in marketing efforts, setting a new standard for future campaigns in the aesthetic medicine industry.

References: Chaffey, D., & Ellis-Chadwick, F. (2019). "Digital Marketing: Strategy, Implementation and Practice." Pearson Education. This comprehensive guide includes insights on AI integration in digital marketing strategies. Davenport, T. H., & Ronanki, R. (2018). "Artificial Intelligence for the Real World." Harvard Business Review, 96(1), 108-116. This article discusses practical applications of AI in business, including marketing. Kietzmann, J., Paschen, J., & Treen, E. (2018). "Artificial intelligence in advertising: How marketers can leverage artificial intelligence along the consumer journey." Journal of Advertising Research, 58(3), 263-267. doi:10.2501/JAR-2018-035 Rust, R. T., & Huang, M. H. (2021). "The AI Revolution in Marketing." Journal of the Academy of Marketing Science, 49(1), 24-42. doi:10.1007/s11747-020-00719-9. This paper explores how AI is transforming marketing strategies and practices. Wedel, M., & Kannan, P. K. (2016). "Marketing Analytics for Data-Rich Environments." Journal of Marketing, 80(6), 97-121. doi:10.1509/jm.15.0413. This article covers the use of AI and analytics in optimizing marketing efforts. Lecun, Y., Bengio, Y., & Hinton, G. (2015). "Deep Learning." Nature, 521(7553), 436-444. doi:10.1038/nature14539. Although more technical, this foundational paper on deep learning highlights the underpinnings of AI technologies used in marketing. Chen, H., Chiang, R. H. L., & Storey, V. C. (2012). "Business Intelligence and Analytics: From Big Data to Big Impact." MIS Quarterly, 36(4), 1165-1188. doi:10.2307/41703503. This paper discusses the role of AI and analytics in business intelligence. Kaplan, A. M., & Haenlein, M. (2019). "Siri, Siri, in My Hand: Who's the Fairest in the Land? On the Interpretations, Illustrations, and Implications of Artificial Intelligence." Business Horizons, 62(1), 15-25. doi:10.1016/j.bushor.2018.08.004. This article explores the implications of AI in various business domains, including marketing. Gentsch, P. (2018). "AI in Marketing, Sales, and Service: How Marketers Without a Data Science Degree Can Use AI, Big Data, and Bots." Springer. This book provides practical insights into applying AI in marketing campaigns. Davenport, T. H. (2020). "The AI Advantage: How to Put the Artificial Intelligence Revolution to Work." MIT Press. This book discusses the strategic implementation of AI in business, including marketing.

Submitter
Moores Ashley
a_c_m_z@hotmail.com - Canada

Presenter
Moores Ashley
Ashley_moores@icloud.com -

#8535

How to be the best practitioner

73 - Marketing & Practice management

Moores A

Background/Objectives: This presentation explores the critical importance of maintaining integrity within the field of aesthetics. Integrity, defined as the adherence to moral and ethical principles, serves as the cornerstone for professional conduct and client trust in aesthetic practices. The foundation of ethical standards in aesthetics involves a commitment to honesty, transparency, and the prioritization of client safety and well-being. A practical checklist will be introduced to help practitioners ensure they uphold these standards consistently. The role of social media in the aesthetics industry is examined, highlighting both its benefits and the potential risks associated with prioritizing trends over ethical practices. Through a discussion of my personal experiences, I will illustrate how social media can sometimes promote unsafe practices and attract the wrong clients, leading to ethical dilemmas. Real-world examples will be shared to demonstrate how to navigate these challenges effectively.

Submitter
Shah Falguni
radianceskinclinic@live.in - India

Presenter
Shah Dr Falguni
drphalgunishah@gmail.com - India

#8538

Polynucleotides: A Potent Biostimulator for Facial Rejuvenation

51 - Regenerative aesthetics

Shah D¹

¹Radiance Skin Clinic, Mumbai, India

Background/Objectives: What are polynucleotides? What is their role as a biostimulator? How do you use them? Are they worth the hype? So many questions we have while introducing a new molecule in our practice. In my practice I have seen that polynucleotides improve the skin tone and delivers deep hydration, giving the skin an antioxidant and moisturizing effect. Being a messenger, RNA (mRNA) that sends signals to our skin cells, it helps in boosting collagen and elasticity.

Submitter
Shah Falguni
radianceskinclinic@live.in - India

Presenter
Shah Dr Falguni
drphalgunishah@gmail.com - India

#8539

Adipose Tissue Regeneration for Facial Rejuvenation

51 - Regenerative aesthetics

Shah D¹

¹Radiance Skin Clinic, Mumbai, India

Background/Objectives: Age related morphological changes in the skin such as wrinkles, fat and bone resorption and skin dehydration are because of loss of elasticity and volume. Replacing the volume with fillers or fat, was the absolute certain way to deal with this, up until now. However, the limitation of fat transfer (as fat was giving volume but not elasticity) and the not so aesthetically accepted appearance post fillers or the current desire for 'natural appearances, has opened the doors for 'biostimulators' to achieve a youthful appearance. These stimulators improve the fibroblast function and skin elasticity.

Submitter
Shah Falguni
radianceskinclinic@live.in - India

Presenter
Shah Dr Falguni
drphalgunishah@gmail.com - India

#8540

Neck and Shoulder Sliming with effective use of Botulinum Toxin

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Shah D¹

¹Radiance Skin Clinic, Mumbai, India

Background/Objectives: Objective: Deliberate and demonstrate how i have been using the molecules and procedures at our disposal as practicing dermatologists, to help achieve a slim and slender neck and shoulder for my patients. Introduction: We all would agree that one of the key dimensions of beauty is a 'Slim & Slender Neck'. Though I believe that focusing only on Neck is not enough, for a more complete outcome, we need to also treat the Shoulder which would add overall aesthetic value to a Slim Neck. There are ways and methods suggested by dietitians, physiotherapists, and gym instructors to achieve a slim Neck. Though it's easier said than done. Today with advancement of Aesthetic medicine, we have at our disposal molecules and procedures that can help achieve a slim and slender neck for our patients.

Submitter
Sofra Xanya
science@iellios.com - United Kingdom

Presenter
Professor Sofra Xanya
science@iellios.com - United Kingdom

#8541

Hair Loss Stress and Inflammation

52 - Hair restoration

Professor Sofra X¹

¹London University, London, United kingdom

Background/Objectives: We offer a thorough analysis of the various physiological and psychological factors contributing to hair loss. Physiological factors include inflammation, metabolic imbalance and nutritional deficiencies. Psychological causes examine stress, anxiety, depression and emotional conflict. Treatment modalities list the reported and actual statistical significance of around 190 published clinical and scientific laser and RF studies on hair loss and hair growth. Some RF and laser studies postulate short-term improvement in hair health, but without following up to control for possible eventual adverse side effects. One of the main issues is using slightly different versions of the same technologies for both hair growth and hair removal. The second issue is the undocumented long-term effects of trauma-based procedures. A diligent evaluation of other methods and techniques is also conducted based on research and clinical studies presented, with stress and inflammation being the centrepieces.

Methods: In our randomized, double-blind longitudinal clinical research, we followed 12 clinical cases treated with a novel resonance anti-inflammatory technology.

Results: All subjects evidenced irreversible hair growth. Results on hair were slower to appear and ranged from three weeks to a month and a half before observing the full effect. The number of treatments required for substantial hair growth depended on the chronicity and severity of hair loss, level of stress, anxiety and depression, rather than age per se. More chronic, difficult cases required more treatments irrespective of whether the subject was younger or older. These results on age-independent hair growth advocated for the importance of combining anti-inflammatory and stress reduction techniques, a synchronization of mind and body to counterbalance emotional disharmony, immune insufficiency, age-accumulated oxidative stress, and disrupted cellular communications.

Conclusions: In evaluating what works and what doesn't we should widen our perspective to the long-term effects of different treatment modalities on hair growth. Stress and inflammation go hand in hand reinforcing each other and they are some of the most important reasons for aging and disease. In understanding cause and effect that is necessary to design our treatment, we must pay attention to the entire person not just the hair. Look for inconspicuous, or insidiously forming inflammation, hidden anxieties and repressed depression by testing for metabolic imbalances, stress levels, inflammatory interleukins or levels of the C-reactive protein that would evidence the presence of inflammation.

References: Akaishi, S., Koike, S., Dohi, T., Kobe, K., Hyakusoku, H., & Ogawa, R. (2012). Nd: YAG laser treatment of keloids and hypertrophic scars. *Eplasty*, 12. Araque A, Navarrete, M (2010). Glial cells in neuronal network function. *Philos Trans R Soc Lond B Biol Sci*. Aug 12; 365(1551): 2375–2381. doi: 10.1098/rstb.2009.0313 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2894949/> Balch WE, Dunphy WG, Braell WA, Rothman JE (1984): Reconstitution of the transport of protein between successive compartments of the Golgi measured by the coupled incorporation of N-acetylglucosamine. *Cell*; 39:405–416. <https://www.ncbi.nlm.nih.gov/pubmed/6498939> DOI: 10.1016/0092-8674(84)90019-9 Baylis, D., Bartlett, D. B., Patel, H. P., & Roberts, H. C. (2013). Understanding how we age: insights into inflammaging. *Longevity & healthspan*, 2, 1–8. Chaban V, Cho T, Reid c. B., Norris K, C (2013). Physically disconnected non-diffusible cell-to-cell communication between neuroblastoma SH-SY5Y and DRG primary sensory neurons. *American Journal of Translational Research*; 5(1): 69–79. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3560476/> PMID: 23390567 Chen, G., Hou, Z., Gulbranson, D. R., & Thomson, J. A. (2010). Actin-myosin contractility is responsible for the reduced viability of dissociated human embryonic stem cells. *Cell stem cell*, 7(2), 240–248. Chow, M. T., Möller, A., & Smyth, M. J. (2012, February). Inflammation and immune surveillance in cancer. In *Seminars in cancer biology* (Vol. 22, No. 1, pp. 23–32). Academic Press. De Heredia, F. P., Gómez-Martínez, S., & Marcos, A. (2012). Obesity, inflammation and the immune system. *Proceedings of the Nutrition Society*, 71(2), 332–338. del Pino Emilia, M., Rosado, R.H., Azuela, A., Graciela, M.G., Argüelles, D., Rodríguez, C. and Rosado, G.M., (2006). Effect of controlled volumetric tissue heating with radiofrequency on cellulite and the subcutaneous tissue of the buttocks and thighs. *Journal of drugs in dermatology*: JDD, 5(8), pp.714–722. PMID: 16989185 El Sayed, M. H., Abdallah, M. A., Aly, D. G., & Khater, N. H. (2016). Association of metabolic syndrome with female pattern hair loss in women: a case–control study. *International journal of dermatology*, 55(10), 1131–1137. Franco, W., Kothare, A., and Goldberg, D.J., (2009). Controlled volumetric heating of subcutaneous adipose tissue using a novel radiofrequency technology. *Lasers in Surgery and Medicine: The Official Journal of the American Society for Laser Medicine and Surgery*, 41(10), pp.745–750. <https://doi.org/10.1002/lsm.20876> Derrick, C. D., Shridharani, S. M., & Broyles, J. M. (2015). The safety and efficacy of cryolipolysis: a systematic review of available literature. *Aesthetic Surgery Journal*, 35(7), 830–836. Duscher, D., Rennert, R. C., Januszyk, M., Anghel, E., Maan, Z. N., Whittam, A. J., ... & Gurtner, G. C. (2014). Aging disrupts cell subpopulation dynamics and diminishes the function of mesenchymal stem cells. *Scientific reports*, 4(1), 7144. Faiella, W., & Atoui, R. (2016). Therapeutic use of stem cells for cardiovascular disease. *Clinical and translational medicine*, 5(1), 1–8. Franco, W., Kothare, A., and Goldberg, D.J., (2009). Controlled volumetric heating of subcutaneous adipose tissue using a novel radiofrequency technology. *Lasers in Surgery and Medicine: The Official Journal of the American Society for Laser Medicine and Surgery*, 41(10), pp.745–750. <https://doi.org/10.1002/lsm.20876> Franco, W., Kothare, A., Ronan, S.J., Grekin, R.C. and McCalmont, T.H., (2010). Hyperthermic injury to adipocyte cells by selective heating of subcutaneous fat with a novel radiofrequency device: feasibility studies. *Lasers in surgery and medicine*, 42(5), pp.361–370. <https://doi.org/10.1002/lsm.20925> Franceschi, C., Garagnani, P., Vitale, G., Capri, M., & Salvioli, S. (2017). Inflammaging and 'Garb-aging'. *Trends in Endocrinology & Metabolism*, 28(3), 199–212. Franceschi, C., Garagnani, P., Parini, P., Giuliani, C., & Santoro, A. (2018). Inflammaging: a new immune–metabolic viewpoint for age-related diseases. *Nature Reviews Endocrinology*, 14(10), 576–590. Freeman, G.J., Long, A.J., Iwai, Y., Bourque, K., Chernova, T., Nishimura, H., Fitz, L.J., Malenkovich, N., Okazaki, T., Byrne, M.C., Horton, H.F., Fouser, L., Carter, L., Ling, V., Bowman, M.R., Carreno, B.M., Collins, M., Wood, C.R. & Honjo, T. (2000). Engagement of the PD-1 immunoinhibitory receptor by a novel B7 family member leads to negative regulation of lymphocyte activation. *J Exp Med*, 192(7), 1027–1034. <https://www.ncbi.nlm.nih.gov/pubmed/11015443> DOI: 10.1084/jem.192.7.1027 Fujita, J., Crane, A. M., Souza, M. K., Dejosez, M., Kyba, M., Flavell, R. A., ... & Zwaka, T. P. (2008). Caspase activity mediates the differentiation of embryonic stem cells. *Cell stem cell*, 2(6), 595–601. Fülöp, T., Larbi, A., & Witkowski, J. M. (2019). Human inflammaging. *Gerontology*, 65(5), 495–504. Gupta, S., & Kalra, A. (2002). Efficacy and safety of intraliesional 5-fluorouracil in the treatment of keloids. *Dermatology*, 204(2), 130–132. Gurdon J., Yamanaoka S. (2012). The Nobel Prize in Physiology or Medicine 2012. NobelPrize.org. Nobel Prize Outreach AB 2024. Wed. 28 Feb 2024. <https://www.nobelprize.org/prizes/medicine/2012/summary> Hata Y, Slaughter CA, Südhof TC (1993). Synaptic vesicle fusion complex contains unc-18 homologue bound to syntaxin. *Nature*; 366:347–351. <https://www.ncbi.nlm.nih.gov/pubmed/8247129> DOI: 10.1038/362318a0 Haworth, R., & Sharpe, M. (2021). Accept or reject: the role of immune tolerance in the development of stem cell therapies and possible future approaches. *Toxicologic Pathology*, 49(7), 1308–1316. Hodi, F.S., Mihm, M.C., Soiffer, R.J., Haluska, F.G., Butler, M., Seiden, M.V., Davis, T., Henry-Spires, R., MacRae, S., Willman, A., Padera, R., Jakitsch, M.T., Shankar, S., Chen, T.C., Korman, A., Allison, J.P., & Dranoff, G. (2003). Biologic activity of cytotoxic T lymphocyte-associated antigen 4 antibody blockade in previously vaccinated metastatic melanoma and ovarian carcinoma patients. *Proc Natl Acad Sci USA*, 100(8), 4712–4717. <https://www.ncbi.nlm.nih.gov/pubmed/12628289> DOI: 10.1073/pnas.0830997100 Hsuan, Y. C. Y., Lin, C. H., Chang, C. P., & Lin, M. T. (2016). Mesenchymal stem cell-based treatments for stroke, neural trauma, and heat stroke. *Brain and behavior*, 6(10), e00526. Ishida, Y., Agata, Y., Shibahara, K., & Honjo, T. (1992). Induced expression of PD-1, a novel member of the immunoglobulin gene superfamily, upon programmed cell death. *EMBO J*, 11(11), 3887–3895. <https://www.ncbi.nlm.nih.gov/pubmed/1396582> PMID: 1396582PMCID: PMC556898 Iwai, Y., Terawaki, S., & Honjo, T. (2005). PD-1 blockade inhibits hematogenous spread of poorly immunogenic tumor cells by enhanced recruitment of effector T cells. *Int Immunol*, 17(2), 133–144. <https://www.ncbi.nlm.nih.gov/pubmed/15611321> DOI: 10.1093/intimm/dxh194 Jalian, H. R., Avram, M. M., Garibyan, L., Mihm, M. C., & Anderson, R. R. (2014). Paradoxical adipose hyperplasia after cryolipolysis. *JAMA dermatology*, 150(3), 317–319. James E. Rothman, Randy W. Schekman and Thomas C. Südhof. Nobel Prize in Physiology or Medicine (2013). Machinery regulating vesicle traffic, a major transport system in our cells. <https://www.nobelprize.org/prizes/medicine/2013/summary/> Jaworsky C, Kligman AM, Murphy GF (1992). Characterization of inflammatory infiltrates in male pattern alopecia: implications for pathogenesis. *Br J Dermatol*; 127(3):239–246. doi: 10.1111/j.1365-2133.1992.tb00121.x1390168 Kaiser CA, Schekman R (1990): Distinct sets of SEC genes govern transport vesicle formation and fusion early in the secretory pathway. *Cell*; 61:723–733. <https://www.ncbi.nlm.nih.gov/pubmed/2188733> DOI: 10.1016/0092-8674(90)90483-u Kapoor, R., Shome, D. and Ranjan, A., (2017). Use of a novel combined radiofrequency and ultrasound device for lipolysis, skin tightening and cellulite treatment. *Journal of Cosmetic and Laser Therapy*, 19(5), pp.266–274. <https://doi.org/10.1080/14764172.2017.1303169> Kandel, E. R., & Squire, L. R. (2000). Neuroscience: Breaking down scientific barriers to the study of brain and mind. *Science*, 290(5494), 1113–1120. Khacho, M., Clark, A., Svoboda, D. S., Azzi, J. G., MacLaurin, J. G., Meghaizel, C., ... & Slack, R. S. (2016). Mitochondrial dynamics impacts stem cell identity and fate decisions by regulating a nuclear transcriptional program. *Cell stem cell*, 19(2), 232–247. Kincaid, C. M., Ben Romdhane, N., Csuka, E. A., Sharma, A. N., Juhasz, M., & Mesinkovska, N. A. (2023). Is There a Role for Radiofrequency Devices in Hair? *Skin Appendage Disorders*, 9(3), 169–178. Koike, S., Akaishi, S., Nagashima, Y., Dohi, T., Hyakusoku, H., & Ogawa, R. (2014). Nd: YAG laser treatment for keloids and hypertrophic scars: an analysis of 102 cases. *Plastic and Reconstructive Surgery–Global Open*, 2(12), e272. Leach, D. R., Krummel, M. F., & Allison, J. P. (1996). Enhancement of antitumor immunity by CTLA-4 blockade. *Science*, 271(5256), 1734–1736. <https://www.ncbi.nlm.nih.gov/pubmed/8596936> DOI: 10.1126/science.271.5256.1734 Legein, B., Temmerman, L., Biessen, E. A., & Lutgens, E. (2013). Inflammation and immune system interactions in atherosclerosis. *Cellular and Molecular Life Sciences*, 70, 3847–3869. Leszczynski, R., da Silva, C. A., Pinto, A. C. P. N., Kuczyński, U., & da Silva, E. M. (2022). Laser therapy for treating hypertrophic and keloid scars. *Cochrane Database of Systematic Reviews*, (9). López-Otín, C., Blasco, M. A., Partridge, L., Serrano, M., & Kroemer, G. (2013). The hallmarks of aging. *Cell*, 153(6), 1194–1217. Ma, R., Chen, L., Hu, N., Caplan, S., & Hu, G. (2023). Cilia and extracellular vesicles in brain development and disease. *Biological Psychiatry*. Faiella, W., & Atoui, R. (2016). Therapeutic use of stem cells for cardiovascular disease. *Clinical and translational medicine*, 5(1), 1–8. Mandal, S., Lindgren, A. G., Srivastava, A. S., Clark, A. T., & Banerjee, U. (2011). Mitochondrial function controls the proliferation and early differentiation potential of embryonic stem cells. *Stem cells*, 29(3), 486–495. Martínez-Jacobo L, Ancer-Arellano CI, Ortiz-Lopez R, et al (2018). Evaluation of the expression of genes associated with inflammation and apoptosis in androgenetic alopecia by targeted RNA-seq. *Skin Appendage Disord*; 4(4):268–273. doi: 10.1159/00048453030410894 Morinaga, H., Mohri, Y., Grachtchouk, M., Asakawa, K., Matsumura, H., Oshima, M., ... & Nishimura, E. K. (2021). Obesity accelerates hair thinning by stem cell-centric converging mechanisms. *Nature*, 595(7866), 266–271. Nikolis, A., & Enright, K. M. (2021). A multicenter evaluation of paradoxical adipose hyperplasia following cryolipolysis for fat reduction and body contouring: a review of 8658 cycles in 2114 patients. *Aesthetic Surgery Journal*, 41(8), 932–941. Nishimura, H., Nose, M., Hiai, H., Minato, N., & Honjo, T. (1999). Development of Lupus-like Autoimmune Diseases by Disruption of the PD-1 gene encoding an ITIM motif-carrying immunoreceptor. *Immunity*, 11, 141–151. Novick P, Schekman R (1979): Secretion and cell-surface growth are blocked in a temperature-sensitive mutant of *Saccharomyces cerevisiae*. *Proc Natl Acad Sci USA* 1979; 76:1858–1862. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC383491/> doi: 10.1073/pnas.76.4.1858 Ojeh, N., Bharatha, A., Gaur, U., & Forde, A. L. (2020). Keloids: current and emerging therapies. *Scars, burns & healing*, 6, 205951310940499. Oschman J. L. (2005). Energy and the healing response, *Journal of Bodywork and Movement Therapies* 3–15. doi: 10.1016/s1360-8592(03)00092-5. URL [https://dx.doi.org/10.1016/s1360-8592\(03\)00092-5](https://dx.doi.org/10.1016/s1360-8592(03)00092-5) Patel, K. V., Farrant, P., Sanderson, J. D., & Irving, P. M. (2013). Hair loss in patients with inflammatory bowel disease. *Inflammatory Bowel Diseases*, 19(8), 1753–1763. Paul, M. and Mulholland, R.S., (2009). A new approach for adipose tissue treatment and body contouring using radiofrequency-assisted liposuction. *Aesthetic plastic surgery*, 33(5), pp.687–694. DOI 10.1007/s00266-009-9342-z Park, J. S., Kim, H. Y., Kim, H. W., Chae, G. M., Oh, H. T., Park, J. Y., ... & Kwak, S. J. (2005). Increased caveolin-1, a cause for the declined adipogenic potential of senescent human mesenchymal stem cells. *Mechanisms of ageing and development*, 126(5), 551–559. Peng, Y., Ma, A., Xiao, Z., Hao, J., Feng, R., Wang, C., ... & Zhao, T. (2023). Technical specifications for ethics review of human stem cell research. *Cell Proliferation*, 13556. Perin MS, Fried VA, Mignery GA, Jahn R, Südhof TC (1990): Phospholipid binding by a synaptic vesicle protein homologous to the regulatory region of protein kinase C. *Nature*; 345:260–263. <https://www.ncbi.nlm.nih.gov/pubmed/2333096> DOI: 10.1038/345260a0 Peyravian, N., Deo, S., Daunert, S., & Jimenez, J. J. (2020). The inflammatory aspect of male and female pattern hair loss. *Journal of inflammation research*, 879–881. Rajan, Varaguna & Murray, Rachael. (2008). The duplicitous nature of inflammation in wound repair. *Wound Pract Res*. 16, 122–129. Saloman, J. L., Cohen, J. A., & Kaplan, D. H. (2020). Intimate neuro-immune interactions: breaking barriers between systems to make meaningful progress. *Current Opinion in Neurobiology*, 62, 60–67. Santoro, A., Bientinesi, E., & Monti, D. (2021). Immunosenescence and inflammaging in the aging process: age-related diseases or longevity?. *Ageing Research Reviews*, 71, 1042252. So, B. J., Yoon, S. H., & Do, J. T. (2018). Mitochondrial dynamics in stem cells and differentiation. *International journal of molecular sciences*, 19(12), 3893. Smolarczyk, K., Meczekalski, B., Rudnicka, E., Suchta, K., & Szeliga, A. (2024). Association of Obesity and Bariatric Surgery on Hair Health. *Medicina*, 60(2), 325.. Snow, D. M., Lemmon, V., Carrino, D. A., Caplan, A. I., & Silver, J. (1990). Sulfated proteoglycans in astroglial barriers inhibit neurite outgrowth in vitro. *Experimental neurology*, 109(1), 111–130. Sofra, X. (2020) Gain without Pain: Beyond Sport Effortless Exercise Solutions. *Journal of Aesthetic Nursing*, 9, 202–210. <https://doi.org/10.12968/joan.2020.9.5.202> [Citation Time(s):1] Sofra, X. and Lampe, N. (2020) Empowering the Woman: A Comprehensive Model of Sexual Anti-Ageing. *Journal of Aesthetic Nursing*, 9, 118–127. <https://doi.org/10.12968/joan.2020.9.3.118> [Citation Time(s):1] Sofra, X. (2020) How to get rid of visceral fat: a randomised double-blind clinical trial. *Journal of Aesthetic Nursing*, 9(7): 268–275.DOI: <https://doi.org/10.12968/joan.2020.9.7.268> Sofra, X. (2020) Gain without pain: beyond sport effortless exercise solutions. *Journal of Aesthetic Nursing*, 9(5): 202–210.DOI: <https://doi.org/10.12968/joan.2020.9.5.202> Sofra X. (2020) The Importance of Systemic Balance in Safeguarding Health: A Randomized Double-Blind Clinical Trial on VLDL, Triglycerides, Free T3,Leptin, Ghrelin, Cortisol and Visceral Adipose Tissue. *Health*, 12(8).DOI: <https://doi.org/10.4236/health.2020.128078> Sofra, X., & Lampe, N. (2020). Technological Advances in Accelerated Wound Repair and Regeneration. *Health*, 12(7), 717–737. DOI: 10.4236/health.2020.127053 Sofra, X., & Lampe, N. (2020). A Randomized Longitudinal Double-Blind Clinical Trial on Long-Term Neuropathic Symptomatology Relief & Pain Analgesia. *Health*, 12(07), 738. <http://creativecommons.org/licenses/by/4.0/> Sofra, X., Badami, S (2020). Adverse Effects of Sedentary Lifestyles: Inflammation, and High-Glucose Induced Oxidative Stress-A Double Blind Randomized Clinical Trial on Diabetic and Prediabetic Patients. *Health*, 12(08): 1029. Article ID:102260, 20 pages DOI: <https://doi.org/10.4236/health.2020.128076> Sofra, X., Lampe, N. A Randomized Longitudinal Double-Blind Clinical Trial on Long-Term Neuropathic Symptomatology Relief & Pain Analgesia. *Health*, 2020, 12(07): 738. ID:101363,12 pages DOI: 10.4236/health.2020.127054 Sofra, X., Badami, S. (2020) A Review of COVID-19 associated factors: CRP, Creatinine, Bilirubin, VLDL, HDL, Triglycerides, Cortisol and Thyroid Function. *J Endo Metabol Res*, 1(2): 1–17. https://www.maplespub.com/webroot/files/A-Review-of-COVID19-associated-factors-CRP-Creatinine-Bilirubin-VLDL-HDL-Triglycerides-Cortisol-and-Thyroid-Function_1601046593.pdf Sofra, X. Dynamics of Female Sexuality: Hidden Emotional Issues. *Health*, (2020), 12(6): 694–708.DOI: 10.4236/health.2020.126051 Sofra, X., Lampe, N. (2020) Empowering the woman: a comprehensive model of sexual anti-ageing. *Journal of Aesthetic Nursing*, , 9(3): 1127–1201. <https://doi.org/10.12968/joan.2020.9.3.118> Sofra, X. The Affinity between Obesity and COVID-19. *J Endo Metabol Res*, (2020), 1(2): 1–13. https://maplespub.com/webroot/files/The-Affinity-between-Obesity-and-COVID-19_1602748373.pdf Sofra X, Badami S. A Review of COVID19 associated factors: CRP, Creatinine, Bilirubin, VLDL, HDL,Triglycerides, Cortisol, and Thyroid Function. *J Endo Metabol Res.*, (2020), 1(2):1–17. <https://maplespub.com/article/A-Re-view-of-COVID19-associated-factors-CRP-Creatinine-Bilirubin-VLDL-HDL-Triglycerides-Cortisol-and-Thyroid-Function> Sofra X (2022) Liver Repair of NAFLD patients, Following Effortless Exercise and the Possible Involvement of Endogenous Stem Cells. *Journal of Diabetes, Metabolic Disorders and Control Sollner T, Whiteheart W, Brunner M, Erdjument-Bromage H, Geromanos S, Tempst P, Rothman JE*(1993): SNAP receptor implicated in vesicle targeting and fusion. *Nature* 1993; 362:318–324. <https://www.ncbi.nlm.nih.gov/pubmed/8455717> Stroumza, N., Gauthier, N., Senet, P., Moguelet, P., Nail Barthelemy, R., & Atlan, M. (2018). Paradoxical adipose hypertrophy (PAH) after cryolipolysis. *Aesthetic Surgery Journal*, 38(4), 411–417. Takahashi, K., & Yamanaka, S. (2006). Induction of pluripotent stem cells from mouse embryonic and adult fibroblast cultures by defined factors. *cell*, 126(4), 663–676. Touni, H., & Best, T. M. (2003). The inflammatory response: friend or enemy for muscle injury?. *British journal of sports medicine*, 37(4), 284–286 Turinetto, V., Vitale, E., & Giachino, C. (2016). Senescence in human mesenchymal stem cells: functional changes and implications in stem cell-based therapy. *International journal of molecular sciences*, 17(7), 1164. Van Deursen, J. M. (2014). The role of senescent cells in ageing. *Nature*, 509(7501), 439–446. Wang, X., Li, T., Cui, T., Yu, D., Liu, C., Jiang, L., ... & Hu, B. (2018). Human embryonic stem cells contribute to embryonic and extraembryonic lineages in mouse embryos upon inhibition of apoptosis. *Cell research*, 28(1), 126–129. Wessler, I., & Kirkpatrick, C. (2008). Acetylcholine beyond neurons: the non-neuronal cholinergic system in humans. *British journal of pharmacology*, 154(8), 1558–1571. Wilson P, Ralston. Electron-Gated Ion Channels: With Amplification by NH3 Inversion Resonance. Institution of Engineering and Technology, 2005 - Science - 190 pages https://books.google.com.hk/books/about/Electron_Gated_Ion_Channels.html?id=5zaAkQhKZPOC&source=kp_cover&redir_esc=y Yao, X., Li, H., & Leng, S. X. (2011). Inflammation and immune system alterations in frailty. *Clinics in geriatric medicine*, 27(1), 79–87. Yu, A. J., Luo, Y. J., Xu, X. G., Bao, L. D., Tian, T., Li, Z. X., ... & Li, Y. H. (2018). A pilot split-scan study of combined fractional radiofrequency microneedling and 5% topical minoxidil in treating male pattern hair loss. *Clinical and Experimental Dermatology*, 43(7), 775–781. Zhang, W., Fan, M., Wang, C., Mahawar, K., Parmar, C., Chen, W., ... & Global Bariatric Research Collaborative. (2021). Hair loss after metabolic and bariatric surgery: a systematic review and meta-analysis. *Obesity Surgery*, 31, 2649–2659 Zhu, L., & Skoutch, A. I. (2001). Coordinating cell proliferation and differentiation. *Current opinion in genetics & development*, 11(1), 91–97.

Submitter
Alizadeh Navid
navid.alizadeh@caregeneva.com - Switzerland

Presenter
Alizadeh Navid
navid.alizadeh@caregeneva.com -

#8550

New Aesthetic Unit (NAU) method: a comprehensive method based on precise anatomical assessment and multilayering panfacial treatment for hyaluronic acid fillers

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Alizadeh N

Background/Objectives: Recent progress in anatomy enables a more sophisticated approach to treat patients with facial aesthetic concerns (PFAC) with HA fillers. Furthermore, advances in rheology have offered a range of HA fillers with different biomechanical properties adapted to different indications.

Methods: Based on recent anatomical and rheological progresses, the author has developed a new methodology that couples an accurate patient assessment tool and a panfacial treatment instrument. In the presented method, the face is divided into 6 units called New Aesthetic Units (NAU). NAUs are classified on the extent of volume deficiency and asymmetry, ranging from none, to moderate and to severe deficiencies. After discussion with the patient regarding the assessment findings, a customized treatment plan, including timelines and number of sessions, is recommended. The modalities of the treatment are exhaustively described for each NAU based on multilayering, best practice medicine, and expert consensus available in the literature.

Results: Before-and after-case studies are presented to illustrate how the NAU method is used in routine practice for the treatment of two patients with HA fillers.

Conclusions: The NAU method is not only a practical and accurate roadmap for the assessment and treatment of PFAC with HA fillers, but also facilitates communication between injectors/patients and also data analysis.

References: 1. Hyaluronic Acid Based Dermal Fillers Market Size, Share & COVID-19 Impact Analysis, By Crosslinking Type (Monophasic and Biphasic), By Application (Scar Treatment, Wrinkle Correction Treatment, Lip Enhancement, Restoration of Volume/Fullness, and Others), By End-user (Specialty & Dermatology Clinics, Hospitals & Clinics, and Others), and Regional Forecast, 2023-2030. Available from: <https://www.fortunebusinessinsights.com/industry-reports/hyaluronic-acid-based-dermal-fillers-market-100951>. 2. Lipko-Godlowska, S., et al., Whole-Face Approach with Hyaluronic Acid Fillers. *Clin Cosmet Investig Dermatol*, 2021. 14: p. 169-178. 3. Leclerc, T., et al., European Burns Association guidelines for the management of burn mass casualty incidents within a European response plan. *Burns*, 2023. 49(2): p. 275-303. 4. Deuschl, G., et al., European Academy of Neurology/Movement Disorder Society - European Section guideline on the treatment of Parkinson's disease: I. Invasive therapies. *Eur J Neurol*, 2022. 29(9): p. 2580-2595. 5. Wollenberg, A., et al., Consensus-based European guidelines for treatment of atopic eczema (atopic dermatitis) in adults and children: part I. *J Eur Acad Dermatol Venereol*, 2018. 32(5): p. 657-682. 6. de Maio, M., MD Codes™: A Methodological Approach to Facial Aesthetic Treatment with Injectable Hyaluronic Acid Fillers. *Aesthetic Plast Surg*, 2021. 45(2): p. 690-709. 7. Schenck, T.L., et al., The Functional Anatomy of the Superficial Fat Compartments of the Face: A Detailed Imaging Study. *Plast Reconstr Surg*, 2018. 141(6): p. 1351-1359. 8. Trévidic, P., et al., Midface Multilayering Filler Injection Technique: Understanding of the Dynamic Facial Anatomy Through a "Smiling Cadavers" Anatomical Study. *Plast Reconstr Surg*, 2022. 149(6): p. 1326-1336. 9. van Loghem, J., et al., Consensus on the Use of Hyaluronic Acid Fillers from the Cohesive Polydensified Matrix Range: Best Practice in Specific Facial Indications. *Clin Cosmet Investig Dermatol*, 2021. 14: p. 1175-1199. 10. Gallagher, C.J., & Kaufman, J., Resilient Hyaluronic Acid (RHA®) Fillers, in *Procedures in Cosmetic Dermatology: Soft Tissue Augmentation-E-Book*, 59. 2023. 11. Gonzalez-Ulloa, M., Restoration of the face covering by means of selected skin in regional aesthetic units. *Br J Plast Surg*, 1956. 9(3): p. 212-21. 12. Rohrich, R.J. and J.E. Pessa, The fat compartments of the face: anatomy and clinical implications for cosmetic surgery. *Plast Reconstr Surg*, 2007. 119(7): p. 2219-2227. 13. Cotofana, S., et al., The Functional Anatomy of the Deep Facial Fat Compartments: A Detailed Imaging-Based Investigation. *Plast Reconstr Surg*, 2019. 143(1): p. 53-63. 14. Cotofana, S. and N. Lachman, Anatomy of the Facial Fat Compartments and their Relevance in Aesthetic Surgery. *J Dtsch Dermatol Ges*, 2019. 17(4): p. 399-413. 15. Boehm, L.M., et al., Facial Aging: A Quantitative Analysis of Midface Volume Changes over 11 Years. *Plast Reconstr Surg*, 2021. 147(2): p. 319-327. 16. Rohrich, R.J., J.L. Lisiecki, and M.V. Chiodo, Differential Fat Grafting to Address Facial Asymmetry in Facelifting. *Plast Reconstr Surg*, 2023. 17. Linden, O.E., et al., The Relationship between Age and Facial Asymmetry. *Plast Reconstr Surg*, 2018. 142(5): p. 1145-1152. 18. Coimbra, D.D. and B. Stefanello, Myomodulation with Facial Fillers: A Comprehensive Technical Guide and Retrospective Case Series. *Aesthetic Plast Surg*, 2023. 47(3): p. 1162-1174. 19. Trévidic, P., et al., Injection Guidelines for Treating Midface Volume Deficiency With Hyaluronic Acid Fillers: The ATP Approach (Anatomy, Techniques, Products). *Aesthet Surg J*, 2022. 42(8): p. 920-934. 20. Lacombe, V.G., Volumizing Fillers for Skin: Selection Strategies. *Facial Plast Surg Clin North Am*, 2023. 31(4): p. 521-524. 21. Cotofana, S., et al., An Update on the Anatomy of the Forehead Compartments. *Plast Reconstr Surg*, 2017. 139(4): p. 864e-872e. 22. Huang, R.L., et al., Anatomical Study of Temporal Fat Compartments and its Clinical Application for Temporal Fat Grafting. *Aesthet Surg J*, 2017. 37(8): p. 855-862. 23. Xie, Y., et al., Fat Grafting for Facial Contouring (Temporal Region and Midface). *Clin Plast Surg*, 2020. 47(1): p. 81-89. 24. Casabona, G., et al., Full-face effects of temporal volumizing and temporal lifting techniques. *J Cosmet Dermatol*, 2020. 19(11): p. 2830-2837. 25. Mendelson, B.C. and S.R. Jacobson, Surgical anatomy of the midcheek: facial layers, spaces, and the midcheek segments. *Clin Plast Surg*, 2008. 35(3): p. 395-404; discussion 393. 26. Cotofana, S., et al., Midface: Clinical Anatomy and Regional Approaches with Injectable Fillers. *Plast Reconstr Surg*, 2015. 136(5 Suppl): p. 219s-234s. 27. Cotofana, S., et al., The Surface-Volume Coefficient of the Superficial and Deep Facial Fat Compartments: A Cadaveric Three-Dimensional Volumetric Analysis. *Plast Reconstr Surg*, 2019. 143(6): p. 1605-1613. 28. Rao, B.K., et al., Tear Trough Filler Techniques Utilizing Hyaluronic Acid: A Systematic Review. *Plast Reconstr Surg*, 2022. 149(5): p. 1079-1087. 29. Liu, X., et al., The Efficacy and Safety of Hyaluronic Acid Injection in Tear Trough Deformity: A Systematic Review and Meta-analysis. *Aesthetic Plast Surg*, 2024. 48(3): p. 478-490. 30. Wong, C.H. and B. Mendelson, Facial soft-tissue spaces and retaining ligaments of the midcheek: defining the premaxillary space. *Plast Reconstr Surg*, 2013. 132(1): p. 49-56. 31. Rohrich, R.J., et al., The Evolving Role of Blending of the Lid-Cheek Junction in Lower Blepharoplasty. *Plast Reconstr Surg*, 2018. 142(2): p. 377-382. 32. Fitzgerald, R., J. Carqueville, and P.T. Yang, An approach to structural facial rejuvenation with fillers in women. *Int J Womens Dermatol*, 2019. 5(1): p. 52-67. 33. Surek, C.K., J. Vargo, and J. Lamb, Deep Pyriform Space: Anatomical Clarifications and Clinical Implications. *Plast Reconstr Surg*, 2016. 138(1): p. 59-64. 34. Schelke, L., et al., Precision in Midfacial Volumization Using Ultrasound-Assisted Cannula Injections. *Plast Reconstr Surg*, 2023. 152(1): p. 67-74.

Submitter
Gutop Ekaterina
mgutop@mail.ru - Armenia

Presenter
Gutop Ekaterina
mgutop@mail.ru -

#8553

Zero point of lifting. Temples with fillers.

43 - Anatomy related to non-or minimally invasive approaches

Gutop E

Background/Objectives: The temporal area is one of the most important zones which loses volume with age. However, it is vital to take into account all individual peculiarities both aesthetic and anatomical of this area. The choice in depth and correction technique has to be based on the goal of the treatment for the lifting of the lateral brow position, restoration of volume, improvement in lower face contour. Anatomical challenges should also be taken into account. Deep-type injections with needle are safer and predictable in their result but must be founded on an anatomical base. Using injections below the superficial temporal fascia with cannula for the temporal area presents the opportunity to create a more lifting effects with limited quantity of filler but the correct insertion point for the cannula has to be selected.

Submitter
Gutop Ekaterina
mgutop@mail.ru - Armenia

Presenter
Gutop Ekaterina
mgutop@mail.ru -

#8554

Injection and LEBD methods for periorbital zoneMY

45 - Combination treatments

Gutop E

Background/Objectives: Individual aesthetic and anatomical characteristics of the periorbital zone and type of aging processes of the person should be taken into account when planning rejuvenation in periorbital area. Concavity of the forehead, horizontal and glabellar lines, "crow's feet", lowered brows, tear trough and age-related changes in volumes and contours of the periorbital area: all may be treated in a variety of ways. The selection in treatment methods is at the prerogative of the doctor. All layers such as skin, muscle structures, fat compartments, system of ligaments and bone structures in areas around the orbit should be analyzed during patient assessment as a target treatment option for correction with LEBD and injection methods. The main recommendation is to use LEBD as a first step. The improvement in quality of the skin, renovation of ligaments and improvement in fat compartments can be achieved by using laser, RF and HIFU technologies. It is better to perform injection methods as a next step. Treatment with BTX is one of the most frequently used in aesthetic practice. Individuality in points, doses and correction technique should be based on the individual peculiarities of the muscles and their activity. By treatment with HA fillers, improvement in volumes and contours should be obtained. Fillers with low hydrophilic characteristics and cannula injection technique are preferable for the safe correction in periorbital area. Collagen products are the new option for correction of the periorbital area. Best results can be obtained by using LEBD and injection methods in combination in personal treatment programs.

Submitter
Gutop Ekaterina
mgutop@mail.ru - Armenia

Presenter
Gutop Ekaterina
mgutop@mail.ru drgutop@gmail.com -

#8555

Lower contour of the face with fillers and LEBD

45 - Combination treatments

Gutop E

Background/Objectives: Planning the treatment of the lower contour, individual aesthetic and anatomical peculiarities of the face, individual nature of the aging processes and suitable method of correction of existing problem should be taken into consideration. HIFU technologies for improvement of the lower contour should be done with FULL FACE approach. Morphotype of the face and type of aging processes determine the treatment protocols. HA fillers for the temporal area, mid face, chin and jawline should be done as a next step. Improvement of the lower contour should be achieved by personal treatment protocol of non-surgical lifting with fillers. It is based on the characteristics of ligaments creating the support for soft tissues. The aesthetic centre of lower face are lips can be treated as “finishing touch”.

Submitter
Gutop Ekaterina
mgutop@mail.ru - Armenia

Presenter
Gutop Ekaterina
mgutop@mail.ru drgutop@gmail.com -

#8556

Full face with fillers: Lateral and Centro-facial lifting. New concept of facial rejuvenation

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Gutop E

Background/Objectives: Nowadays requests by patients for natural appearance dictate the new concept of facial rejuvenation. Lifting of the face and improvement in facial contours is the goal of the correction. The treatment should be done in two parts: lateral and centro-facial lifting. Lateral zones of the face such as temporal, zygomatic and sub-malar areas should be treated laterally from the line of true ligaments. Lifting and improvement in the lower contour can be achieved by injections of the temporal area below superficial temporal fascia. Peculiarities of zygomatic, mandibular, platyzmal-auricular ligaments can be used to achieve the effect of non-surgical lifting with fillers. These characteristics should be taken into account when upper, mid and lower face treatment is being performed sequentially with appropriate techniques and amounts of product. Injections of the lateral zones as a first step help to achieve harmonizing lifting effect, improvement in facial contours and avoid overfilling of the face. Central zones of the face should be corrected as a next step. HA product with high G' and high characteristics of plasticity should be used for this correction. Using cannula or needle is at the prerogative of the doctor.

Submitter
Gutop Ekaterina
mgutop@mail.ru - Armenia

Presenter
Gutop Ekaterina
mgutop@mail.ru drgutop@gmail.com -

#8557

Minimally invasive laser treatment in combination with fillers and threads for improvement of the lower face

46 - Threads

Gutop E

Background/Objectives: Improvement in lower contour areas is one of the most commonly requested among the patients. The best aesthetic result can be achieved by a variety of ways. The individual aesthetic and anatomical peculiarities of the lower face in particular, face in general and individual nature of the aging processes should be taken into consideration. The understanding of goals for correction, identification of anatomical variations such as fat compartments, ligament structures are vital because on this is dependent the choice and sequence of treatment methods. Laser lipolysis is one of the most effective ways in improving the lower contour. Excessive amount of fat in submental area and jawlines can be treated by invasive laser lipolysis with the protocols of simultaneous tightening of the skin. Correction with HA fillers may be performed as the next stage of the treatment. Correction of the chin and temple areas aid immediate harmony of the face. By threadlifting methods, lifting and fixing of soft tissues in an aesthetic advantageous position should be performed. Tissues react to the implantation of threads consisting of poly-lactic acid and caprolactone by forming of collagen (type 1 and 3) fibers. The sequence of the stages is at the prerogative of the doctor.

Submitter
Phan Minh Doan
bs.minhdoan@gmail.com - Vietnam

Presenter
Phan Doan
bs.minhdoan@gmail.com -

#8558

SUBCISION AND LASER FOR ACNE SCARS: REFINING TECHNIQUES FOR ENHANCED OUTCOMES

42 - Scars & acne

Phan D

Background/Objectives: Treating acne scars on skin types IV-VI according to the Fitzpatrick's classification remains challenging due to post-inflammatory hyperpigmentation, which hinders the use of laser treatments and limits the intensity of microneedling and dermabrasion procedures. Moreover, Vietnam's polluted environment contributes to a higher risk of infection following invasive procedures such as subcision, fractional laser resurfacing, microneedling, exacerbating the effectiveness of acne scar treatments.

Submitter
Murdy Mary
mary.murdy@abbvie.com - United States

Presenter
Siramangkalanont Vorapot
s.vorapot@gmail.com - Thailand

#8559

Safety and Efficacy of Multiple Simultaneous Cryolipolysis Treatments Using a Dual Applicator Cryolipolysis System

50 - Body contouring & skin tightening

Moradi A¹, Stevens G², Tsai F³, Ostrowski R³, Gamio S³, Siramangkalanont V⁴, Bachelor E⁵

¹Moradi M.D., Vista, United states

²Department of Surgery, Division of Plastic and Reconstructive Surgery, University of Southern California, Los Angeles, United states

³Allergan Aesthetics, an AbbVie Company, Pleasanton, United states

⁴Hertitude Aesthetic Medical, Bangkok, Thailand

⁵Eastbay Aesthetic Surgery, Pleasanton, United states

Background/Objectives: Cryolipolysis is an effective and well-tolerated non-invasive procedure for subcutaneous fat reduction in many cleared body areas. Treatment efficiency may be improved if multiple treatment cycles are performed simultaneously during treatment visits. A new dual applicator cryolipolysis system was developed to enable simultaneous treatments. This study examined the safety and efficacy of performing multiple simultaneous cryolipolysis treatments on the torso using the dual-applicator system.

Methods: This multi-center, prospective, open-label study enrolled healthy adults (age 22-65 years; BMI of ≤ 30 kg/m²) who received 2 cryolipolysis treatment sessions on the torso (abdomen, flanks, and/or back/bra fat) performed 6 weeks apart that comprised at least 8 treatment cycles in total. The primary efficacy endpoint was at least 70% correct identification of baseline vs. 12-week post-final treatment photographs of the torso by 2 out of 3 blinded independent physician reviewers. Further photography review was conducted on photographs of the individual treated body areas. Safety was evaluated by monitoring the frequency of all adverse events (AEs) and device- and/or procedure-related (ADEs) throughout the study.

Results: Thirty-five participants received study treatments (77.1% female) with a mean age of 40.4 years (range: 24-61) and mean BMI of 24.9 kg/m² (range: 20.5-30). Participants received an average total of 20.8 (range, 9-33) treatment cycles delivered over the two treatment sessions, with an average of 11.7 and 10.5 treatment cycles delivered in treatment sessions 1 and 2 respectively. Participants received on average 8.3 treatment cycles to the flank, 9.4 treatment cycles to the abdomen, and 5.4 treatment cycles to the back/bra area over two sessions. Twenty-eight participants were included in the primary effectiveness analysis. At 12 weeks post-final treatment, 75% (n = 21/28) of pre-treatment images of the torso were correctly identified by the majority (at least 2 out of 3) of independent physician reviewers, meeting the primary efficacy endpoint. For the individual treatment areas, 85.7% (n = 24/28) of the flank, 74.1% (n = 20/27) of the abdomen, and 50.0% (n = 9/18) of the back/bra fat pre-treatment photos were correctly identified. Sixteen ADEs were reported in 31% (n=11/35) of participants, the majority (n = 14/16) of which were mild and the remainder (n = 2/16) moderate in severity (one case each of erythema and post procedure pain). The most common ADEs were vasovagal and subcutaneous induration, each seen in 8.6% of participants. Most ADEs resolved by the end of the study except for 2 cases of subcutaneous induration/nodule in 1 participant, which were resolving by the study exit. The safety endpoint was considered met as no serious ADEs were reported, and the frequency of ADEs was similar to what was reported in a previous study where a comparable number of treatment cycles were delivered.¹

Conclusions: The dual applicator cryolipolysis system is effective and well-tolerated for subcutaneous fat reduction when used to deliver multiple treatment cycles simultaneously on the torso over two treatment sessions.

References: Tan T, Snell B, Braun M, et al. High Participant Satisfaction Achieved Using Cryolipolysis for Fat Reduction of the Abdomen and Flanks. *Aesthet Surg J.* 2021;42(7):sjab421-. doi:10.1093/asj/sjab421

Submitter
Murdy Mary
mary.murdy@abbvie.com - United States

Presenter
Siramangkalanont Vorapot
s.vorapot@gmail.com - Thailand

#8560

Treatment With Novel Dual-Applicator Cryolipolysis System Yields Significant Reduction in Fat Layer Thickness: Results From a Multicenter, Prospective Study

50 - Body contouring & skin tightening

Bachelor E¹, Moradi A², Stevens G³, Lee J⁴, Gamio S⁴, Siramangkalanont V⁵, Ostrowski R⁴

¹Eastbay Aesthetic Surgery, Pleasanton, United states

²Moradi M.D., Vista, United states

³Division of Plastic and Reconstructive Surgery, Department of Surgery, University of Southern California, Los Angeles, United states

⁴Allergan Aesthetics, an AbbVie Company, Pleasanton, United states

⁵Hertitude Aesthetic Medical, Bangkok, Thailand

Background/Objectives: Cryolipolysis is a clinically proven, noninvasive, subcutaneous fat reduction treatment.^{1,2} With dual applicators, CoolSculpting® Elite supports multiple cryolipolysis treatments in a single visit. This study evaluated the safety and effectiveness of multiple simultaneous cryolipolysis treatments to the torso and quantified fat layer thickness reduction with ultrasound imaging.

Methods: Participants in this multicenter, prospective study participants received 2 cryolipolysis treatment sessions to the torso 6 weeks apart. Ultrasound images were collected pretreatment and at follow-up timepoints. The primary efficacy endpoint was correct identification of baseline vs 12-week post-final treatment by $\geq 2/3$ blinded, independent reviewers; success being $\geq 70\%$ correct identification of pretreatment images. The assessments 4 weeks after initial treatment were exploratory.

Results: 35 patients were treated (female, 77.1%; mean age, 40 years; mean body mass index, 24.9 kg/m²) for flanks (n=35), abdomen (n=34), back fat (n=13), and bra fat (n=14). Average (standard deviation [SD]) number of cycles delivered across 2 treatment sessions was 20.8 (7.9). At 12 weeks after final treatment, 75% (95% confidence interval [CI]: 55%, 89%) of baseline images were correctly identified. At 4 weeks after initial treatment, 68% (95% CI: 48%, 84%) of baseline images were correctly identified. Ultrasound measurements demonstrated significant mean (SD) reduction in fat layer thickness across all treatment areas from baseline to 4 weeks after initial treatment (−0.16 cm [0.17 cm]; $P<0.05$) and 12 weeks after final treatment (−0.33 cm [0.33 cm]; $P<0.05$). At 4 weeks after initial treatment, reduction from baseline in fat layer thickness was −0.16 cm (0.18 cm) in the abdomen, −0.19 cm (0.14 cm) in the flanks and −0.11 cm (0.23 cm) in the back/bra area ($P<0.05$ for all). At 12 weeks after final treatment, reduction from baseline in fat layer thickness was −0.34 cm (0.35 cm) in the abdomen, −0.40 cm (0.30 cm) in the flanks and −0.17 cm (0.26 cm) in the back/bra area ($P<0.05$ for all). 11 participants experienced 16 device- and/or procedure-related adverse events (AEs), 14 of which were mild and resolved by the end of the study. No device- and/or procedure-related AEs were serious.

Conclusions: Multiple simultaneous cryolipolysis treatments can be safe and effective, with high rates of correct identification of pretreatment images and significant reduction in fat layer thickness as measured by ultrasound imaging at 12 weeks after final treatment. Significant reduction from baseline in fat layer thickness was also observed at 4 weeks after initial treatment by ultrasound imaging.

References: 1. Tan T, Snell B, Braun M, et al. High participant satisfaction achieved using cryolipolysis for fat reduction of the abdomen and flanks. *Aesthet Surg J*. 2022;42(7):760-770. 2. Altmann J, Jehle F, Mang W. Patient satisfaction, recommendation rate, and patient comfort with an FDA-cleared cryolipolysis system. *Aesthet Surg J Open Forum*. 2022;4:ojac067.

Submitter
Gabueva Elona
gelona2014@yandex.ru - Russia

Presenter
Elona Gabueva
gelona2014@yandex.ru - Russia

#8561

Calcium hydroxyapatite or hyaluronic acid. Instead of or together?

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Elona G

Background/Objectives: Complex facial correction with fillers of different nature. To achieve a lifting effect and improve proportions, it is necessary to work in different layers, different areas and with preparations of different chemical groups. The report presents my own 12-year experience in using calcium hydroxyapatite and hyaluronic acid preparations in one procedure in different layers and different areas of the face. The face can be conditionally divided into lifting and volumetric parts. The task is to move the tissues, to create a vector of contraction in the lateral parts of the face. Injections into the central areas of the face do not lead to lifting, they give the effect of volumization. Therefore, we inject the calcium hydroxyapatite dilution (hyper delusion) into the lateral areas of the face, and the hyaluronic acid preparation into the central areas of the face. The correction algorithms and show you step-by-step in the video how The report presents detailed anatomical data, indications for correction, as well as the most effective and safest correction techniques. I will demonstrato perform the procedures correctly. In my report, I will present the results of the procedures performed, before and after photos.

Submitter
Khan Shumaila Qasim
SHMAILA.KHAN@YAHOO.COM - Pakistan

Presenter
Shumaila Khan
shmaila.khanl@yahoo.com - Pakistan

#8562

AESTHETIC CONSULTATION ASSESSMENT AND PLANNING IN CORRESPONDENCE TO THE TRIANGLE OF AESTHETIC DIAGNOSIS

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Shumaila K¹

¹PMDC, Islamabad, Pakistan

Background/Objectives: "Harmony in Beauty: Unveiling the Complexities of Aesthetic Perception and Intervention" Problem Statement: This comprehensive study explores the intriguing dynamics of beauty perception, drawing insights from 900 patients over the last 15 years of practice, across diverse cultures and genders. Emotions and their evolving expressions are explored, unveiling the impact of aging on the face's harmony. Objectives: The role of consultations in aesthetic practices is emphasized, with a focus on synthesizing patients' beauty goals to provide a clear roadmap for personalized treatments. Material and methods: • The study introduces seven dimensions to articulate beauty, with a particular focus on the eyes, cheeks, nose, lips and chin, framed by light and shade as a vital element in presenting youth and vitality. • The examination extends to facial convexity, incorporating aspects of geometry, anatomical diagnosis, and the various components of the aging process. The identified priority areas for intervention like mid-face, upper face, or lower face, underscore the need for a holistic approach to retain facial harmony. • The study also challenges the slightly overrated concept of symmetry, proposing a nuanced blend of structures to avoid an artificial appearance. Conclusion The study advocates for a holistic perspective, akin to an artist's nuanced perception, emphasizing that effective restoration cannot be achieved through isolated interventions. Key words Harmony, Beauty, aesthetics. Perceptions, holistic

Submitter
Mashhood Asher
asher.mashhood@yahoo.com - Pakistan

Presenter
Asher Mashhood
asher.mashhood@yahoo.com -

#8563

“Ethnical nose shapes and role of Liquid rhinoplasty”

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Asher M

Background/Objectives: Different ethnic populations have different nose shapes that God has created to match their nony structures, lips and eyes. Globalization and social media have convinced our patients to improve thier nose shapes, and everyone wishes to make their nose look like a celebrity, not considering how this nose shape would sinl with overall facial profile.

Methods: We explored the etenic differences in nose shapes based on the available literature. We explored the essential elements to consider when planning and performing non-surgical rhinoplasty.

Results: In the talk we highlighted 5 issues that can be corrected with liquid rhinoplasty. The talk also highlights the limitations of this procedure in comparison with surgical rhinoplasty. Furthermore the point to stress is that the liquid rhinoplasty does not create major ehanic shift in nose shapes as compared to surgical rhinoplasty.

Conclusions: A good understanding of anatomy, safe methods and patients expectations are essential to deliver desired optimal results. The etanic differences must be carefully taken into consideration while performing liquid rhinoplasty.

References: Broer PN, Buonocore S, Morillas A, Liu J, Tanna N, Walker M, Ng R, Persing JA. Nasal aesthetics: a cross-cultural analysis. *Plast Reconstr Surg*. 2012 Dec;130(6):843e-850e. doi: 10.1097/PRS.0b013e31826da0c1. Erratum in: *Plast Reconstr Surg*. 2013 May;131(5):1208. Ng, Ruben [corrected to Ng, Reuben]. PMID: 23190836. Romo T 3rd, Abraham MT. The ethnic nose. *Facial Plast Surg*. 2003 Aug;19(3):269-78. doi: 10.1055/s-2003-43162. PMID: 14574634.

Submitter
Mashhood Asher
asher.mashhood@yahoo.com - Pakistan

Presenter
Asher Mashhood
asher.mashhood@yahoo.com -

#8564

NASOLABIAL MYSTERIES: DIVERSE FOLDS, DISTINCT CAUSES, TAILORED TREATMENTS

45 - Combination treatments

Asher M

Background/Objectives: Nasolabial folds (NLF) is one of the most commonly attended area in aesthetic practice world-wide. It is always the first area when a new aesthetic physician start injecting. Nevertheless, the aesthetic physicians are unable to give consistent results while filling the NLF. This is probably due to wrong patient selection, wrong technique and wrong choice of treatment.

Methods: To explore the salient differences in the etiology and morphology of nasolabial folds and ways to recognize these subtle but significant differences. To highlight the importance of assessment before planning how to treat the NLF. For treatment there is no single method that applies to all the folds but the choice of treatment, whether fillers, threads or toxins depends upon the type of NLF.

Results: We will show the salient features of NLF in assessment during my presentation and will explain it further by real pictures of my patients who underwent various treatment modalities for the management of NLF.

Conclusions: All NLF are not similar. They differ in their etiology and morphology. Similarly there is no one way to treat the NLF

References: Zhang L, Tang MY, Jin R, Zhang Y, Shi YM, Sun BS, Zhang YG. Classification of nasolabial folds in Asians and the corresponding surgical approaches: By Shanghai 9th People's Hospital. J Plast Reconstr Aesthet Surg. 2015 Jul;68(7):914-9. doi: 10.1016/j.bjps.2015.03.023. Epub 2015 Apr 1. PMID: 25890777.

Submitter
Mashhood Asher
asher.mashhood@yahoo.com - Pakistan

Presenter
Asher Mashhood
asher.mashhood@yahoo.com -

#8565

“Lift your life with thread-lift: Discover the intricacies of patient selection”

46 - Threads

Asher M

Background/Objectives: Thread lift is rapidly gaining popularity as a procedure of immediate face lift among the aesthetic physicians and the patients. Nevertheless, the aesthetic physicians are unable to give consistent results in their patients. This is probably due to wrong patient selection, wrong technique and wrong choice of threads.

Methods: To explore the salient differences in the anatomical features of the face that should prompt the physicians to decide, which patient would benefit best from the thread-life and who will be needing other treatment modalities or mixed approach. To explore the essential elements to be consider while planning and performing a thread-lift.

Results: In a case series, I will show the patients who displayed excellent results after thread-lift and those whose thread-lift was relatively unsuccessful, highlighting the reasons in each case. I will also demonstrate the right approach to draw vectors for thread lifting, fixed and hanging points and thread insertion technique.

Conclusions: Thread-lift is not a procedure that is indicated for everyone. Right patient's selection is key to success. Technique and choice of product is very important in giving good results

References: Adam A, Karypidis D, Ghanem A. Thread Lifts: A Critical Analysis of Treatment Modalities. J Drugs Dermatol. 2020 Apr 1;19(4):413-417. doi: 10.36849/JDD.2020.3646. PMID: 32272519. Zhukova O, Dydykin S, Kubiková E, Markova N, Vasil'ev Y, Kapitonova M. A New Complex Minimally Invasive Thread Lift Method for One-Time Three-Step Fixation of the Face and Neck Soft Tissues. Arch Plast Surg. 2022 May 27;49(3):296-303. doi: 10.1055/s-0042-1748641. PMID: 35832146; PMCID: PMC9142270.

Submitter
Khan Shumaila Qasim
SHMAILA.KHAN@YAHOO.COM - Pakistan

Presenter
Khan Shumaila
shmaila.khan@yahoo.com -

#8566

3D-PERIORBITAL LIQUID FIX

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Khan S

Background/Objectives: Introduction: The periorbital subunit is one of the first facial regions to show signs of aging, primarily due to volume depletion of the soft tissue and bony resorption. This is a major cause of concern in both male and female patients. The early signs of aging start to appear around the eyes. Area that are affected are Trough (loss of elasticity + hollowing) Dyschromias (Dark Circles) Fine lines / wrinkles Eye bags Increase translucency of the under-eye skin Malar Bags or Malar festoons Drooping of lateral eye brow Reduction in the bony prominences

Material & Methods: 3D Peri-orbital Liquid Fix an innovative treatment modality. The minimally-invasive, office-based nature of fillers has resulted in their increased popularity and filler placement has become one of the most commonly performed treatments in aesthetic practice. This modality includes following 3 sequential therapies: - Fillers Botulinum toxin Skin Booster (Bio revitalizer) Tear trough, supraorbital bony prominence and eye brow correction can be done with fillers. These fillers can be injected by with either a needle or a cannula, based on physician preference. Botulinum toxin can be used for Peri-orbital wrinkles, lines and brow lift. Improvement in the texture of the skin, hydration, tone and complexion of peri-orbital skin can be done by skin boosters We present a study with 80 patients who underwent peri orbital rejuvenation for different purposes. Patients were divided in three groups according to their presenting complaints. Patients were analyzed on visual analyzing scale (VAS) from 1 to 10 by themselves, their attendants, injector physician and peer colleague. Group-1 Fifty patients with tear trough, under eye wrinkles and dyschromia (Dark Circles) were treated with soft G filler + boosters + Botox. Age ranges from 25 to 45. Tear trough showed immediate improvement. Wrinkles got improved after 7 days and dyschromia improved over the period of six weeks. Group-2 Fifteen patients presenting with mild to moderate puffy eyes + naso jugal groove and under eye wrinkles (with better elasticity). Treated with fillers + Botox. Age ranges from 25 to 45 years (both male & female). Immediate improvement seen for the puffy eyes and naso jugal groove Wrinkles improved in 7 to 10 days. Group-3 Fifteen patients with imperfections of eye brow area, above and below supraorbital bony rim, dropping of lateral/medial eye brow due to volume loss and skeleton changes with aging. Patient's age ranges from 40 to 60 years. Treatment done particularly with filler+Botox. The visual analyzing scale (VAS) immediate improvement was appreciated. Effect of Botox for eye brow lift made results more pronounced after 10 days. Conclusion: The peri orbital is a great aesthetic impact area and consequently brings high satisfaction to the patients. The nonsurgical rejuvenation by 3D peri orbital liquid fix is a new and innovative treatment technique. Filler/boosters/toxins in various combinations significantly all are liquid fix that significantly improves the texture of the skin with bio revitalization, decreases the tension in the muscles improving the wrinkles, expression lines and signs of aging. This 3D liquid fix is effective in improving all the peri orbital imperfection in all age groups.

Submitter
Khan Shumaila Qasim
SHMAILA.KHAN@YAHOO.COM - Pakistan

Presenter
Khan Shumaila
shmaila.khan@yahoo.com -

#8567

BEYOND THE LINES: TAILORING BOTOX FOR UNIQUE FOREHEADS

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Khan S

Background/Objectives: “The Impact of Customized Botox Injection Techniques on Frontalis Muscle & Glabellar Muscle Wrinkles: A Comparative Study” Background: The anatomy of the frontalis muscle & glabellar muscle varies significantly among individuals, necessitating customized injection techniques for optimal results. The efficacy of personalized Botox injection techniques has dominating results as compared to standard techniques and no treatment. Objective: The effectiveness and safety of customized Botox injection techniques tailored to individual frontalis muscle anatomy in reducing forehead & glabella wrinkles, compared to a standard injection technique and a control group. Methods: In my presentation, I will highlight these variations in morphology and anatomy of Frontalis / Corrugator Supercilii / Procerus muscle along with Transverse Nasalis and will highlights the injection points and units of Botox for each indication. This would be followed by some pictures of my real patients who benefitted from the above technique. Conclusion: Customized Botox injection techniques, which consider individual anatomical variations of the frontalis muscle & Glabella muscle, provide superior wrinkle reduction and higher patient satisfaction compared to standard injection techniques and no treatment.

Submitter
Khan Shumaila Qasim
SHMAILA.KHAN@YAHOO.COM - Pakistan

Presenter
Khan Shumaila
shmaila.khan@yahoo.com -

#8568

The Versatile Pico Laser: The Ultimate Workhorse for Asian Facial Rejuvenation beyond tattoo removal

49 - Lasers, EBDs & Light

Khan S

Background/Objectives: Introduction: Pico Laser has constantly made advantages over conventional laser because it can target the pigment and skin tissues more precisely, thus producing better results with less side effects. Moreover skin of color and wide range of cosmetic concerns can be addressed with less down time. Objective: Objective of this talk is to discuss the versatility of the laser in the terms of treatment options. Starting from Acne Scars, fine lines/wrinkles, pigmentation or photo damaged skin to sensitive flushed/erythematic/thin skin with vascularity or rosacea. The laser has highest safety in the skin of color (The Asian skin) with less or no down time that makes it stand out from other laser devices. Materials/Methods: Total number of 60 patients with different indications were enrolled in this study for treatment over the last 2 years. Different probes that were used for the treatment includes; Pico Hand Piece 1064 nm / 532, Pico Collimate 1064 nm / 532, Pico PDL 595 nm, PICO Red Light 650 nm, and PICO Fractional Hand Piece 1064 nm / 532. Among the 60 patients included in the study 40 were with hyperpigmentation, 10 were with facial flush/rosacea, and 10 were with post acne scars. The response to laser treatment is assessed by serial photographs and patient's satisfaction based on visual analog scale. Results: Among the patients who underwent Pico laser sessions, the overall satisfactory response was observed in 60% of the patients, based on significant difference between before and after picture and patient satisfaction of more than 7/10. Conclusion: Pico is a versatile laser that can be successfully used as a treatment tool in patients with hyperpigmentation, facial flushing and acne scars. The results depends on use of correct probe, parameters and patient's selection.

Submitter
Khan Shumaila Qasim
SHMAILA.KHAN@YAHOO.COM - Pakistan

Presenter
Khan Shumaila
shmaila.khan@yahoo.com -

#8569

AESTHETIC CONSULTATION ASSESSMENT AND PLANNING IN CORRESPONDENCE TO THE TRIANGLE OF AESTHETIC DIAGNOSIS

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Khan S

Background/Objectives: "Harmony in Beauty: Unveiling the Complexities of Aesthetic Perception and Intervention" Problem Statement: This comprehensive study explores the intriguing dynamics of beauty perception, drawing insights from 900 patients over the last 15 years of practice, across diverse cultures and genders. Emotions and their evolving expressions are explored, unveiling the impact of aging on the face's harmony. Objectives: The role of consultations in aesthetic practices is emphasized, with a focus on synthesizing patients' beauty goals to provide a clear roadmap for personalized treatments. After the consultation the treatment road map should touch all the three facets of beauty diagnosis i.e; Phycology, Anatomy and Aesthetics. Material and methods: The study introduces seven dimensions to articulate beauty, with a particular focus on the eyes, cheeks, nose, lips and chin, framed by light and shade as a vital element in presenting youth and vitality. The examination extends to facial convexity, incorporating aspects of geometry, anatomical diagnosis, and the various components of the aging process. The identified priority areas for intervention like mid-face, upper face, or lower face, underscore the need for a holistic approach to retain facial harmony. The study also challenges the slightly overrated concept of symmetry, proposing a nuanced blend of structures to avoid an artificial appearance. Conclusion The study advocates for a holistic perspective, akin to an artist's nuanced perception, emphasizing that effective restoration cannot be achieved through isolated interventions.

Submitter
Wang Shiou-han
sonolaser@gmail.com - Taiwan

Presenter
Wang Shiou-han
sonolaser@gmail.com -

#8570

Optimizing Non-Invasive Monopolar Radiofrequency: A Physical and Mathematical Analysis for Enhanced Safety and Efficacy

50 - Body contouring & skin tightening

Wang S

Background/Objectives: Monopolar radiofrequency (MRF) is a pivotal technique in aesthetic medicine. It utilizes electric current to generate heat in soft tissues, promoting collagen contraction and neocollagenesis. However, treatment outcomes can vary widely depending on the operator's expertise. By examining the underlying physics and anatomical structures, comprehensive techniques can be developed to standardize and enhance MRF treatments.

Methods: High-frequency ultrasound assesses skin thickness and thermal relaxation times, ensuring safety and optimizing treatment. An integrated cooling system regulates the depth of MRF by adjusting impedance, protecting the skin from excessive heat. Reviewing manufacturer patents uncovers improved firing techniques, such as stamping with superpass or sliding methods. Understanding the roles of the superficial musculoaponeurotic system (SMAS) and retaining ligaments is crucial for addressing facial aging. Patient feedback suggests that using multiple-pass vectors at the highest tolerable energy level effectively accumulates heat. The collagen tissue-temperature curve is essential for determining appropriate heating times. Mathematical heat transfer and thermodynamics models enhance the precision of MRF treatments, with fibrous septae identified as primary channels for electric current in fatty tissues.

Results: Applying specific techniques has significantly improved the safety and efficacy of MRF in aesthetic procedures. Key components such as high-frequency ultrasound, advanced cooling systems, and precise firing methods are essential. The response to accumulated energy follows an exponential-like curve. In contrast, the multiple-pass vectors and collagen tissue-temperature curve are critical in determining the optimal heating time for the targeted region.

Conclusions: MRF therapy remains a crucial modality in aesthetic applications. Comprehensive techniques based on physical analysis and mathematical modeling can enhance the safety and effectiveness of MRF treatments. This presentation will review relevant studies and introduce updated concepts in MRF therapy to advance clinical practices further.

References: 1. Appl Mech Rev. 2009 Jul 9;62(5):050801. 2. Arch Dermatol. 2004 Feb;140(2):204-209. 3. J Am Acad Orthop Surg. 2000 Sep-Oct;8(5):305-313. 4. J Am Board Fam Pract. 1991 Nov-Dec;4(6):419-26. 5. J Drugs Dermatol. 2006 Sep;5(8):707-12. 6. Phys Med Biol. 1996 Nov;41(11):2271-93. 7. Lasers Surg Med. 2015 Feb;47(2):183-95. 8. Processes. 2020 Dec;8(12):1660. doi: 10.3390/pr8121660. 9. Laser-Tissue Interactions: Fundamentals and Applications. 3rd enlarged ed. Berlin Heidelberg: Springer; 2003. ISBN: 9783540721918. 10. Hruza G, Avram M. Lasers and Lights. 3rd ed. Elsevier Saunders; 2012. 11. AJR Am J Roentgenol. 2000 Feb;174(2):323-31. 12. Arch Dermatol. 1998 Oct;134(10):1255-9. doi: 10.1001/archderm.134.10.1255. 13. AJR Am J Roentgenol. 2000 Feb;174(2):323-31. doi: 10.2214/ajr.174.2.1740323. 14. Clin Plast Surg. 2016 Jul;43(3):551-6. doi: 10.1016/j.cps.2016.03.013. 15. J Lasers Med Sci. 2017 Summer;8(3):118-122. doi: 10.15171/jlms.2017.21. 16. Hruza GJ, Tanzi EL, Dover JS, Alam M. Lasers and Lights: Procedures in Cosmetic Dermatology Series. 4th ed. Dover JS, Alam M, editors. 2017. p. 109. 17. J Biomed Opt. 2006;11(3):34020. 18. Science. 1983;220(4596):524-7. doi: 10.1126/science.6836297. 19. Surg Radiol Anat. 2002;24:183-189. 20. Phys Med Biol. 1996 Nov;41(11):2251-69. 21. Br J Dermatol. 1987 Oct;117(4):419-28. 22. Int J Mol Sci. 2019 May;20(9):2126. 23. Adv Wound Care (New Rochelle). 2016 Mar;5(3):119-136. 24. Nutrients. 2020 Mar;12(3):870. 25. J Am Acad Dermatol. 2011 Mar;64(3):524-35. 26. Aesthet Surg J. 2007 Jan-Feb;27(1):19-28. 27. Kim HJ, Seo KK, Lee HK, Kim J. Clinical Anatomy of the Face for Filler and Botulinum Toxin Injection. 2016. 28. Facial Plast Surg Clin North Am. 2018 May;26(2):123-134. 29. Proc Inst Mech Eng H. 2002;216(3):171-83. 30. Fire Mater. 1976;3(2):100-105. 31. Am J Pathol. 1947 Sep;23(5):695-720. 32. J Drugs Dermatol. 2020 Jan;19(1):20-26. 33. Cosmet Dermatol. 2011 Jul;24(7):327-330. 34. Facial Plast Surg Clin North Am. 2011 May;19(2):347-359.

Submitter
Waqas Falak
falakwaqas24@gmail.com -

Presenter
Falak Waqas
falakwaqas24@gmail.com -

#8572

intimate regenerative filler

47 - Genital restoration & Functional gynecology

Falak W

Background/Objectives: Intimate aesthetic procedures for vaginal rejuvenation have seen a surge in demand due to increased awareness and desire for non-surgical options. Women often seek solutions for concerns like vaginal laxity, loss of volume, and diminished sexual satisfaction. Traditional surgical approaches, while effective, involve downtime and potential complications. Intimate regenerative filler therapy, combining platelet-rich plasma (PRP) for rejuvenation and biofiller derived from platelet-poor plasma (PPP) for volume restoration, presents a promising minimally invasive alternative. This study aims to evaluate the efficacy and safety of intimate regenerative filler therapy in restoring vaginal volume and shape while rejuvenating tissue quality. Additionally, it seeks to explore the impact of repeated monthly sessions on treatment outcomes and patient satisfaction.

Methods: A prospective clinical trial was conducted involving 50 women seeking vaginal rejuvenation. Participants underwent three sessions of intimate regenerative filler therapy, spaced monthly. The biofiller was prepared from PPP, providing structural support and volume enhancement, while PRP was used for its regenerative properties. Assessments included subjective evaluations (patient-reported outcomes on sexual satisfaction and quality of life) and objective measurements (vaginal laxity scale, histological analysis of tissue changes).

Results: Significant improvements were observed in vaginal volume and shape, with participants reporting enhanced sexual satisfaction and reduced vaginal laxity following treatment. Objective measurements demonstrated increased collagen and elastin deposition in histological samples, indicative of tissue regeneration and improved elasticity. Patient-reported outcomes indicated high satisfaction rates, with 85% of participants expressing improved self-esteem and 90% reporting enhanced sexual function. Adverse events were minimal, primarily transient swelling and mild discomfort at injection sites, resolving within days post-treatment.

Conclusions: Intimate regenerative filler therapy using PRP and biofiller derived from PPP offers a safe, effective, and minimally invasive approach to vaginal rejuvenation. The treatment achieves simultaneous restoration of volume and shape while enhancing tissue quality and sexual satisfaction. The repetitive monthly sessions contribute to sustained improvements, making it a valuable option in aesthetic medicine for addressing intimate aesthetic concerns. Further research is warranted to explore long-term outcomes and optimize treatment protocols for diverse patient populations.

References:Lista, F., & Ahmad, J. (2015). The Role of Regenerative Medicine in Plastic Surgery. *Clinics in Plastic Surgery*, 42(2), 173-180. Pardo, J., Solà, V., Ricci, P. A., & Rueda, M. P. (2014). Vaginal rejuvenation using platelet-rich plasma. *International Journal of Gynaecology and Obstetrics*, 125(2), 174-177. Thanasis, C., Papadimitriou, G., Charalambous, C. P., & Paraskevopoulos, F. (2011). Platelet-rich plasma for the treatment of chronic Achilles tendinopathy. *International Journal of Oral and Maxillofacial Surgery*, 40(8), 752-758. Kaminer, M. S., Dover, J. S., & Gildenberg, S. R. (2016). Non-Surgical Vaginal Rejuvenation Using a Novel Fractional CO2 Laser. *Dermatologic Surgery*, 42(4), 451-454. Alinsod, R. (2015). Combination Therapy with Laser and Platelet-Rich Plasma for Vaginal Rejuvenation: A Case Series. *Journal of Minimally Invasive Gynecology*, 22(6), 1148-1152.

Submitter
Waqas Falak
falakwaqas24@gmail.com -

Presenter
Falak Waqas
falakwaqas24@gmail.com -

#8573

Tri-Factor Hair Restoration Therapy for Postmenopausal Women

52 - Hair restoration

Falak W

Background/Objectives: Female pattern alopecia (FPA) and generalized hair thinning significantly affect postmenopausal women, leading to a decline in self-esteem and quality of life. Traditional treatments like topical minoxidil have limited efficacy, necessitating the exploration of combination therapies. Oral minoxidil and oral finasteride, combined with topical RCP (a formulation of Redensyl, Capixyl, and Procapil), offer a novel therapeutic approach aimed at maximizing hair regrowth and minimizing hair loss. To evaluate the efficacy and safety of combining oral minoxidil and oral finasteride with topical RCP in postmenopausal women with generalized hair thinning and female pattern alopecia. This study also aims to assess patient satisfaction and the impact on quality of life.

Methods: A randomized, controlled trial was conducted with 150 postmenopausal women diagnosed with generalized hair thinning and FPA. Participants were divided into two groups: the combination therapy group (oral minoxidil 1 mg daily, oral finasteride 1 mg daily, and topical RCP applied twice daily) and the control group (topical RCP alone applied twice daily). Assessments were performed at baseline, 3 months, and 6 months, including trichoscopic evaluations for hair density and thickness, global photographic assessments, and patient-reported outcomes on hair growth, satisfaction, and quality of life. Safety was monitored through regular follow-ups and reporting of adverse events. Data were analyzed using paired t-tests and ANOVA to compare the efficacy and safety of the treatments.

Results: At 6 months, the combination therapy group showed a significant increase in hair density and thickness compared to the control group ($p < 0.001$). Trichoscopic evaluations revealed substantial improvement in hair follicle health and reduced hair thinning. Global photographic assessments confirmed the visual enhancements, with marked improvements in hair coverage. Patient-reported outcomes indicated high satisfaction rates in the combination therapy group, with 88% of participants experiencing noticeable hair growth and improved hair quality, compared to 60% in the control group. Quality of life scores also improved significantly in the combination group ($p < 0.01$). Adverse events were minimal, with the most common being mild hypertrichosis and scalp irritation, which resolved with continued treatment.

Conclusions: The combination of oral minoxidil and oral finasteride with topical RCP is a highly effective treatment for generalized hair thinning and female pattern alopecia in postmenopausal women. This regimen significantly enhances hair density, thickness, and overall hair quality, leading to improved patient satisfaction and quality of life. The safety profile is favorable, with manageable side effects. This combination therapy offers a promising approach in the management of FPA and generalized hair thinning, warranting further studies to confirm these findings and optimize treatment protocols.

References: Olsen, E. A., & Hordinsky, M. K. (2013). Female Pattern Hair Loss. *Journal of the American Academy of Dermatology*, 69(4), 559-571. Gupta, A. K., & Charrette, A. (2015). The efficacy and safety of platelet-rich plasma for the treatment of androgenic alopecia: A systematic review and meta-analysis. *Journal of the American Academy of Dermatology*, 73(4), 645-656. Sinclair, R. (2019). Safety and efficacy of oral minoxidil (OM) for hair loss: A retrospective study of 102 patients. *Journal of the American Academy of Dermatology*, 81(2), 548-550. Tosti, A., & Piraccini, B. M. (2009). Finasteride treatment of female pattern hair loss. *Archives of Dermatology*, 145(10), 1188-1190. Kwon, O. S., Han, J. H., Yoo, H. G., Chung, J. H., Cho, K. H., Eun, H. C., & Kim, K. H. (2007). Human hair growth enhancement in vitro by green tea epigallocatechin-3-gallate (EGCG). *Phytomedicine*, 14(7-8), 551-555.

Submitter
Conadera Jan Raymond
jrconadera@gmail.com - Philippines

Presenter
Conadera Jan Raymond
jrconadera@gmail.com -

#8574

SOCIAL MEDIA INQUIRIES: FROM THE SCREEN TO THE CHAIR

73 - Marketing & Practice management

Conadera J

Background/Objectives: To effectively engage into valuable conversation with possible clients To educate and give knowledge about the service To build credibility online To effectively explain and convince clients within a short amount of time online To filter clients who are inquiring only and clients who are interested to have a consultation To effectively invite clients to book for a consultation

Methods: Sharing my experience, sample of situations , solutions, presentation, videos and photos.

Results: Marketers and doctors can learn to handle inquiries on the most effective and efficient way of communicating.

Conclusions: Social Media is an effective tool and effective communication with patients is crucial to translate into actual treatments.

Submitter
Agan Cyril Mitchel
cyril_agan@yahoo.com - Philippines

Presenter
Agan Cyril Mitchel
cyril_agan@yahoo.com -

#8575

Single Entry Point Jawline Sculpting with HA Fillers and Lipolysis

45 - Combination treatments

Agan C

Background/Objectives: INTRODUCTION: Using combination injectables of lipolysis (“mesolipo”) and HA fillers are one of the non-surgical treatments to sculpt the jawline. Lipolysis will reduce bulk of the fat of the submandibular and lower cheeks while fillers will create structure and projection for the jawline. However, because of the multiple injections from mesolipo plus the injections of HA, often leads to bruising and some downtime. ANATOMY AND PRODUCT: Anatomy of the areas will be treated first to demonstrate the layers where the filler and the lipolytics will be injected. Vessels of the area will be mapped for awareness of safety. Lipolytic product to be used is Deoxycholic acid. The ideal HA filler to be used is a projecting filler with good tissue integration and resilience. TECHNIQUE: A single entry point technique will be used so that both treatments can be done at the same time, reducing the number of injections into the skin. An entry point will be made using a G23 needle by the jowl area. HA filler will be injected using a G25 50mm cannula through the jowl posteriorly to reach the angle of the mandible. Retrograd injections will be done to create a line to form the jawline. The same entry point can also be used to go anteriorly with the same cannula to give projection and shape the chin. The same insertion point can also be used to inject lipolytic agent (i.e. deoxycholic acid), also using a G25 50mm cannula to the jowl and lower cheek fat as well as the submandibular/submental fat. Fanning technique to the areas will be used to spread it evenly on the superficial fat compartments. CONCLUSION: The single entry point technique is a convenient way to sculpt the jawline with less downtime and better outcomes.

Submitter
Agan Cyril Mitchel
cyril_agan@yahoo.com - Philippines

Presenter
Agan Cyril Mitchel
cyril_agan@yahoo.com -

#8576

The Power of Multidirectional Barbed Threads in Asian Nose Augmentation

46 - Threads

Agan C

Background/Objectives: INTRODUCTION: Nose augmentation in Asia has grown in popularity. Asian noses usually have low/flat dorsum with bulbous tips and wide ala. Non-surgical options, such as fillers and threads, are preferred for patients not amenable to downtime. Fillers may, however, cause vascular compromise, blindness and migration. Threads on the other hand will not have vascular accidents but can also lead to thread protrusion or contour irregularities ANATOMY AND PRODUCT: Understanding anatomy is crucial to prevent complications. The threads will be implanted in consideration of the layers of the nose, thickness of the skin and position of the cartilages. Multi-directional barbed threads with Polycaprolactone and Poly-L-Lactic Acid (PCL/PLLA) will be used for superior fixation and longer lasting results. TECHNIQUE: Threads are to be implanted on the deep plane (supraperiosteally) continuously from an entry point by the tip to the dorsum and radix and back to the tip, columella and nasal spine. This creates a continuous graft of thread that is more stable and gives good fixation and projection. Video will be shown to demonstrate the technique. Before and after photos to be shown to demonstrate the results of the technique. CONCLUSION: Threadlifting is a safe alternative to filler medical rhinoplasty. Awareness of the anatomy and the layer to which the threads are implanted is crucial for safe outcomes. The design of the thread, the technique and the manner of deposition leads to good projection and better outcomes.

Submitter
Doser Lani
lani@skinwiserx.com - United States

Presenter
Doser Lani
lani@skinwiserx.com - United States

#8578

Treating Pigmentation and Acne Scars in Melanated Skin: 3 case studies

42 - Scars & acne

Doser L

Background/Objectives: Reviewing treatment algorithms for melanated skin Avoiding energy based devices without skin preparation

Methods: Using 3 case studies, discussing how these patients were treated being Fitzpatrick 4-6. Two of the patients had severe post inflammatory hyperpigmentation by other clinics.

Results: Treatment algorithms for melanated skin for PIH and acne scarring.

Conclusions: Successful treatment algorithms for PIH and acne scarring.

References:to be provided. As these are case studies, they are primary sources.

Submitter
Doser Lani
lani@skinwiserx.com - United States

Presenter
Doser Lani
lani@skinwiserx.com - United States

#8579

The K-Beauty: Are you riding the wave?

40 - Cosmeceuticals, Peels & Superficial regimens

Doser L^{1,2}

¹Revance GURU, Nashville, United states

²Galderma GAIN Trainer, Dalles, United states

Background/Objectives: Korean Beauty products have grow explosively. How can this growing trend be utilized in your clinic. How the S. Korean government can help you export their products.

Methods: Research articles showing the growth of K beauty in the USA and world wide

Results: in 2023 Kauty grew by 300% on Amazon. How to capitalize this trend in your clinic. Who to contact to get assistance from South Korea. Sephora could not make it in Seoul beat out by Olive Young and Etude House. Estee Lauder is pairing with K Beauty in 2024 to create and research K products.

Conclusions: This patient and influencer led trend is continuing. Does your clinic carry K beauty?

References: Flawless by Eunji Lee <https://www.koreaherald.com/view.php?ud=20240630050070> <https://www.kedglobal.com/beauty-cosmetics/newsView/ked202406260011>

Submitter
Farias Neto Arcelino
a.fariasneto@yahoo.com.br - Brazil

Presenter
Farias Neto Arcelino
instituto@arcelinofarias.com - Brazil

#8581

Full face aesthetics: the balance between face and teeth

45 - Combination treatments

Farias Neto A¹, Dantas De Medeiros F¹

¹Arcelino Farias Institute, Natal, Brazil

Background/Objectives: Full face rehabilitation, which aims to achieve harmony between teeth and face, is a fundamental concept in contemporary facial aesthetics and rejuvenation procedures. By combining advanced dental techniques with facial rejuvenation procedures, this comprehensive approach considers not only facial aesthetics, but also the importance of teeth for a youthful and attractive face. Well-aligned, white and healthy teeth can enhance facial symmetry, improve lip contour and even smooth out wrinkles around the mouth. On the other hand, misaligned, missing, worn or yellowed teeth can negatively affect facial harmony, resulting in an aged appearance, especially when contrasted with smooth, wrinkle-free skin. Therefore, full face rehabilitation seeks to restore a youthful facial appearance in full, regardless of the situation, whether on the face at rest or smiling. Therefore, the purpose of this work is to present the relationship between dental and facial treatments in search of facial harmony.

Submitter
Roy Iolanda
draiolandaroy@gmail.com - Brazil

Presenter
Roy Iolanda
Maxillofacial Surgery - Brazil

#8582

The Synergy Between PDO Threads and Exosomes for Facial Rejuvenation: Benefits and Clinical Applications

45 - Combination treatments

Roy I¹, Werneck K¹

¹Sao Leopoldo de Mandic, Rio de Janeiro, Brazil

Background/Objectives: Exosomes and PDO threads are complementary technologies that, when combined, can enhance the aesthetic and regenerative benefits for the skin. Exosomes, as extracellular vesicles, act as essential intercellular messengers, transporting key biomolecules such as proteins and nucleic acids between cells. This process not only facilitates crucial cellular communication for tissue regeneration but also stimulates the proliferation of new cells, aiding in the repair and rejuvenation of damaged skin. On the other hand, PDO threads are used as absorbable facial support devices, renowned for their ability to induce collagen and elastin production in the dermis. These mechanical threads not only provide immediate structural support but also stimulate a gradual process of dermal regeneration, resulting in firmer and more elastic skin over time.

Submitter
Murdy Mary
mary.murdy@abbvie.com - United States

Presenter
Siramangkalanont Vorapot
s.vorapot@gmail.com - Thailand

#8583

Treatment With Novel Dual-Applicator Cryolipolysis System Yields Significant Reduction in Fat Layer Thickness: Results From a Multicenter, Prospective Study

50 - Body contouring & skin tightening

Bachelor E¹, Moradi A², Stevens G³, Lee J⁴, Gamio S⁴, Siramangkalanont V⁵, Ostrowski R⁴

¹Eastbay Aesthetic Surgery, Pleasanton, United states

²Moradi M.D., Vista, United states

³Division of Plastic and Reconstructive Surgery, Department of Surgery, University of Southern California, Los angeles, United states

⁴Allergan Aesthetics, an AbbVie Company, Pleasanton, United states

⁵Hertitude Aesthetic Medical, Bangkok, Thailand

Background/Objectives: Cryolipolysis is a clinically proven, noninvasive, subcutaneous fat reduction treatment.^{1,2} With dual applicators, CoolSculpting® Elite supports multiple cryolipolysis treatments in a single visit. This study evaluated the safety and effectiveness of multiple simultaneous cryolipolysis treatments to the torso and quantified fat layer thickness reduction with ultrasound imaging

Methods: Participants in this multicenter, prospective study participants received 2 cryolipolysis treatment sessions to the torso 6 weeks apart. Ultrasound images were collected pretreatment and at follow-up timepoints. The primary efficacy endpoint was correct identification of baseline vs 12-week post-final treatment by $\geq 2/3$ blinded, independent reviewers; success being $\geq 70\%$ correct identification of pretreatment images. The assessments 4 weeks after initial treatment were exploratory.

Results: 35 patients were treated (female, 77.1%; mean age, 40 years; mean body mass index, 24.9 kg/m²) for flanks (n=35), abdomen (n=34), back fat (n=13), and bra fat (n=14). Average (standard deviation [SD]) number of cycles delivered across 2 treatment sessions was 20.8 (7.9). At 12 weeks after final treatment, 75% (95% confidence interval [CI]: 55%, 89%) of baseline images were correctly identified. At 4 weeks after initial treatment, 68% (95% CI: 48%, 84%) of baseline images were correctly identified. Ultrasound measurements demonstrated significant mean (SD) reduction in fat layer thickness across all treatment areas from baseline to 4 weeks after initial treatment (−0.16 cm [0.17 cm]; Pinf0.05) and 12 weeks after final treatment (−0.33 cm [0.33 cm]; Pinf0.05). At 4 weeks after initial treatment, reduction from baseline in fat layer thickness was −0.16 cm (0.18 cm) in the abdomen, −0.19 cm (0.14 cm) in the flanks and −0.11 cm (0.23 cm) in the back/bra area (Pinf0.05 for all). At 12 weeks after final treatment, reduction from baseline in fat layer thickness was −0.34 cm (0.35 cm) in the abdomen, −0.40 cm (0.30 cm) in the flanks and −0.17 cm (0.26 cm) in the back/bra area (Pinf0.05 for all). 11 participants experienced 16 device- and/or procedure-related adverse events (AEs), 14 of which were mild and resolved by the end of the study. No device- and/or procedure-related AEs were serious.

Conclusions: Multiple simultaneous cryolipolysis treatments can be safe and effective, with high rates of correct identification of pretreatment images and significant reduction in fat layer thickness as measured by ultrasound imaging at 12 weeks after final treatment. Significant reduction from baseline in fat layer thickness was also observed at 4 weeks after initial treatment by ultrasound imaging.

References: 1.Tan T, Snell B, Braun M, et al. High participant satisfaction achieved using cryolipolysis for fat reduction of the abdomen and flanks. *Aesthet Surg J*. 2022;42(7):760-770. 2.Altmann J, Jehle F, Mang W. Patient satisfaction, recommendation rate, and patient comfort with an FDA-cleared cryolipolysis system. *Aesthet Surg J Open Forum*. 2022;4:ojac067.

Submitter
Ali Kashif
kashif@drkashif.uk - Pakistan

Presenter
Ali Kashif
kashif@drkashif.uk - United Kingdom

#8584

COMBINATION THERAPY WITH PLLA/ PDLA FILLERS FOR POST ACNE SCAR MANAGEMENT

51 - Regenerative aesthetics

Ali K

Background/Objectives: Living with acne scars can be emotionally challenging for those who suffer with the condition. Studies conducted on people living with post acne scars in pigmented skin indicate a higher level of insecurity and lower self confidence in addition to a toll on their mental health. We present patients whom we have treated with PDLA fillers for post acne scars rejuvenation resulting in better cosmetic outcome. Patients were treated with chemical peeling, subcision followed by PDLA fillers resulting in higher GAIS at 16 and 24 months follow up.

Methods: We studied 46 patients with ice pick, box and rolling scars. 23 patients were randomised in two groups. Modalities used were chemical peeling, subcision with microneedling in both groups in the first 8 weeks, however from 12 week Group 1 patients were treated with PLLA and Group 2 patients were treated with PDLA. PLLA was applied topically with needling however PDLA was injected intradermally. Both groups were given subcutaneous treatment as well 6 weeks apart. Photos were taken at 12 weeks and 24 weeks and results compared.

Results: This treatment approach resulted in scar rejuvenation and improved scar resolution. With overall high GAIS (Global Aesthetic Improvement Scale) and clinical improvement measured by pre and post treatment photography the results with both PLLA and PDLA were comparable with no statistical significance. I will discuss my technique and over all patient results with before and after photography.

Conclusions: Regenerative aesthetics including biostimulators offers a new era of scar management with minimal down time. Currently PLLA/ PDLA are not licenced for post acne scars but studies can prove their efficacy and long term patient safety.

References:Beer, K. (2007). A single-center, open-label study on the use of injectable poly-L-lactic acid for the treatment of moderate to severe scarring from acne or varicella. *Dermatologic surgery*, 33, S159-S167. An, M. K., Hong, E. H., Suh, S. B., Park, E. J., & Kim, K. H. (2020). Combination therapy of microneedle fractional radiofrequency and topical poly-lactic acid for acne scars: a randomized controlled split-face study. *Dermatologic Surgery*, 46(6), 796-802.

Submitter
Ali Kashif
kashif@drkashif.uk - Pakistan

Presenter
Ali Dr Kashif
Kashif@drkashif.uk - United Kingdom

#8585

TheEra of Exosomes in Regenerative Medicine- Exosome vs PRP in Androgenetic Alopecia

52 - Hair restoration

Ali D

Background/Objectives: Androgenetic alopecia (AGA) or male pattern baldness is characterized by reduction of the hair follicles gradually causing conversion of terminal hairs into vellus hair, leading to progressive reduction of the density of hair on the scalp. The aim of this study to compare the results of injections of platelet-rich plasma (PRP) and platelet-rich plasma (PRP) in combination with stromal vascular fraction (SVF), which is rich in adipose-derived stromal cells (with a potential in modulating hair growth cycle) in the upper scalp for the treatment of AGA.

Methods: In this study, 220 adult patients presenting with male pattern baldness were included. Patients were divided into two groups. Group 1 containing 110 patients received plain Platelet-Rich-Plasma (prp) treatment, while the second group was treated with PRP in combination with exosomes. Over the course of the study, a total of 6 sessions were conducted, with each session spaced 4 weeks apart. The results were assessed at the baseline, after 4th session, and 1 month after 6th session. Pre and post trichoscopy images were taken. The assessment of outcomes included both re-injection and changes in hair density at 6 and 12 weeks after injection. The evaluation of changes in the density was conducted using ultra high-resolution photography.

Results: Hair density was significantly increased after 6 weeks and 12 weeks post injection were seen with platelet-rich plasma (PRP) in combination with exosomes. In hair-to-hair matching analyses, new hair grew from active follicles. Furthermore, nonfunctioning hair follicles filled with hyperkeratotic plugs, up to today assumed incapable of forming new hair, proved to grow new hair. No side effects were noted after treatment.

Conclusions: Intra dermal administration of platelet-rich plasma in combination with exosomes showed significant increase in hair density, improves hair regrowth within 6 to 12 weeks. Overall, exosomes hold promise in influencing the hair growth cycle and may serve as a potential therapy in AGA.

References: Hassan, L., Samin, K. A., Mohsin, S., Asif, M. I., Maheshwary, N., & Ahmed, A. (2024). Compare the Efficacy of PRP Intervention VS Exosomes for Hair loss, a Case Series Study. *Dermis*, 4(3), 1-7. Vyas KS, Kaufman J. (2023). Exosomes: the latest in regenerative aesthetics. *Regen Med*. 18(2):181-194.

Submitter
Ali Kashif
kashif@drkashif.uk - Pakistan

Presenter
Ali Kashif
kashif@drkashif.uk - United Kingdom

#8586

Combination treatment in managing women with colour

45 - Combination treatments

Ali K

Background/Objectives: PDRN significantly inhibits melanin synthesis by suppressing melanogenesis via the inhibition of melanogenic gene expression and tyrosinase enzymatic activity. This suggests that PDRN is a hypopigmentation agent that plays an important role in skin whitening. Botulinum toxin injection, a prevalent cosmetic procedure for addressing dynamic wrinkles, exhibits an additional skin lightening effect. The phenomenon is attributed to the inhibition of muscle innervation. Yet, the alteration in melanin levels resulting from this effect remains unqualified and requires further investigation

Methods: The study involved fifty female patients affected by pigmentation, categorized into two groups. Group 1 comprising 25 patients, received treatment through polydeoxyribonucleotide (PDRN) and pigment- treating modalities. In contrast, group 2 patients were subjected to a combined approach involving micro botox injections and other pigment treating techniques. Pre- treatment photography was conducted adhering to standard aesthetic. As with all aesthetic surgical and dermatological protocols.

Results: In group 1, where patients received a combined treatment of pigment- treating modalities and PDRN, a significant reduction in pigmentation was observed in comparison to group 2, where patients underwent pigment treatment with botox.

Conclusions: The combination treatment involving PDRN for pigmentation in women of color has demonstrated remarkable outcomes, characterized by a pronounced reduction in pigment levels, potentially improve skin quality, slow down aging, and improve dermal regeneration. The noteworthy success of the combined approach, offering valuable insights into effective pigmentation management strategies for individuals with diverse skin tones.

References: Erdil, D., Manav, V., Türk, C. B., Kara Polat, A., & Koku Aksu, A. E. (2023). The clinical effect of botulinum toxin on pigmentation. *International Journal of Dermatology*, 62(2), 250-256. Kim, H. M., Byun, K. A., Oh, S., Yang, J. Y., Park, H. J., Chung, M. S., ... & Byun, K. (2022). A mixture of topical forms of polydeoxyribonucleotide, vitamin C, and niacinamide attenuated skin pigmentation and increased skin elasticity by modulating nuclear factor erythroid 2-like 2. *Molecules*, 27(4), 1276.

Submitter
Ali Kashif
kashif@drkashif.uk - Pakistan

Presenter
Ali Dr Kashif Ali
kashif@drkashif.uk - United Kingdom

#8587

Blending biostimulators for volumization & Rejuvenation - An overview of my technique with CaHA

51 - Regenerative aesthetics

Ali D

Background/Objectives: The aging process often leads to significant changes in the skin's extracellular matrix, resulting in undesirable effects such as wrinkles, loss of volume, and decreased hydration. In response to these concerns, aesthetic professionals have turned to a combination of treatments to address age-related skin issues effectively. One of these innovative approaches is the "Rich Blend protocol." This protocol involves the strategic use of various materials, including HA, CaHA, and (PRF), each with its unique benefits for specific facial regions. HA is known for its hydrating and volumizing properties, while CaHA stimulates collagen formation. PRF, on the other hand, forms a three-dimensional fibrin mesh, contributing to tissue regeneration.

Methods: In this study, 50 adult patients underwent non-surgical facial rejuvenation using the Rich Blend procedure. Patients were well-informed about the treatment's objectives and provided their consent. The specific treatment areas were marked, and pre-treatment photography was conducted to document the baseline condition. PRF was prepared from a small blood sample collected from each patient and subsequently mixed with CaHA and HA to create the Rich Blend. The injection technique employed was tailored to individual patient needs, using various methods such as linear threading, serial puncture, farming, and cross-batching.

Results: After a follow-up period of 6 to 8 weeks, patients' outcomes were assessed using the Global Aesthetic Improvement Scale (GAIS). Impressively, over 80% of patients reported satisfactory results with the Rich Blend protocol. Self-reported outcomes were highly positive, with 87% of patients rating their results as "very good," 47% as "excellent," and 41% as "good." Remarkably, 89% of the patients expressed their willingness to choose the Rich Blend protocol again.

Conclusions: In conclusion, the Rich Blend protocol offers an effective solution for facial rejuvenation, addressing issues such as volume loss, collagen stimulation, and skin laxity. Moreover, the incorporation of platelet concentrates with established biomaterials not only enhances outcomes but also reduces treatment costs. This combination of benefits makes the Rich Blend protocol a promising choice for global facial rejuvenation, presenting a valuable option in the realm of aesthetic medicine.

References: Almeida EPM, Levy FM, Buzalaf MAR. "RichBlend" protocol for full-face filling and collagen biostimulation. RGO, Rev Gaúch Odontol. 2023;71:e20230014. <http://dx.doi.org/10.1590/1981-86372023001420210069> Fakhri-Gomez, N., Kadouch, J. Combining Calcium Hydroxylapatite and Hyaluronic Acid Fillers for Aesthetic Indications: Efficacy of an Innovative Hybrid Filler. Aesth Plast Surg 46, 373–381 (2022). <https://doi.org/10.1007/s00266-021-02479-x>

Submitter
Varela Rud
rud_varela@hotmail.com - Brazil

Presenter
Rud Machado Varela
rud_varela@hotmail.com -

#8590

Redefining the Male Facial Contour: Tailoring Hyaluronic Acid Rheologies for Natural Mandibular Definition in Young Patients

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Rud M

Background/Objectives: Facial harmony and definition are crucial aspects of aesthetic appeal. In this case report, we present the successful application of hyaluronic acid (HA) fillers with varying rheologies to achieve a more angular and defined lower face in a young male patient seeking to address a perceived "baby face" appearance. A 23-year-old male patient presented with a concern regarding his perceived "childish" facial features and expressed a desire to achieve a more masculine, defined jawline. A thorough evaluation, including facial analysis and measurements of bigonial and bizygomatic distances, was conducted to determine the appropriate treatment plan.

Methods: To achieve the desired sculpted jawline and natural definition, a strategically chosen combination of HA fillers with varying rheologies, totaling 7 ml, was employed. High G' HA (1 ml per side of the gonial angle, 2 ml in the chin), this initial injection targeted the gonial angles and chin using a bolus technique in a supraperiosteal-to-hypodermal approach. Medium G' HA (1 ml per side of the mandible), To further refine and enhance the mandibular definition and contour, 1 ml of medium G' HA was injected on each side of the mandible using a retroinjection technique with a cannula. Soft/Moderate G' HA (1 ml per side of the mandibular body and ramus), Finally, 1 ml of a soft/moderate G' HA filler was injected on each side using a cannula to achieve smooth, natural-looking volumization of the mandibular body and ramus.

Results: The combined application of HA fillers with varying rheologies successfully transformed the patient's facial profile. The projected gonial angles and chin created a more angular and defined jawline, while the smooth volumization of the mandibular body and ramus ensured a natural-looking enhancement. The patient was highly satisfied with the results, which addressed his concerns and improved his overall facial harmony.

Conclusions: This case report demonstrates the effectiveness of using HA fillers with varying rheologies to achieve precise mandibular definition in a young male patient. By tailoring the filler selection and injection techniques to the specific areas of concern, a natural-looking and aesthetically pleasing result can be achieved.

References: Ohrlund A, Winlof P, Bromée T, Prygova I. Differentiation of NASHA and OBT Hyaluronic Acid Gels According to Strength, Flexibility, and Associated Clinical Significance. *J Drugs Dermatol*. 2024 Jan 1;23(1):1332-1336. doi: 10.36849/JDD.7648. PMID: 38206143. Khosravani N, Weber L, Patel R, Patel A. The 5-Step Filler Hand Rejuvenation: Filling with Hyaluronic Acid. *Plast Reconstr Surg Glob Open*. 2019 Jan 14;7(1):e2073. Braz A, Eduardo CCP. Reshaping the Lower Face Using Injectable Fillers. *Indian J Plast Surg*. 2020 Aug;53(2):207-218. doi: 10.1055/s-0040-1716185. Epub 2020 Aug 29. PMID: 32884187; PMCID: PMC7458843.

Submitter
Varela Rud
rud_varela@hotmail.com - Brazil

Presenter
Rud Machado Varela
rud_varela@hotmail.com - Brazil

#8591

Targeting Aging in Males: Assessing the Efficacy of PLLA, Skinboosters, and HIFU Ultrasound for Facial Prejuvenation

45 - Combination treatments

Rud M¹

¹Rud Varela, Brasília, Brazil

Background/Objectives: Prejuvenation, a preventive approach to aging, is gaining popularity among men seeking to maintain a youthful appearance. Combining non-surgical treatments like High-Intensity Focused Ultrasound (HIFU), Poly-L-Lactic Acid (PLLA) injections, and Skinboosters offers a comprehensive strategy for facial rejuvenation. This case report explores the successful application of a multimodal strategy for facial rejuvenation in a 38-year-old male patient. Following a comprehensive evaluation utilizing advanced techniques like high-frequency ultrasound and 3D stereophotogrammetry, we designed a personalized treatment regimen combining non-surgical modalities like HIFU, PLLA injections, and Skinboosters.

Methods: Prior to initiating the rejuvenation treatment regimen, a thorough evaluation was conducted to assess the patient's specific needs and baseline facial features. This comprehensive evaluation encompassed both visual inspection, High-Frequency Ultrasound and 3D Stereophotogrammetry. A low-energy, high-density approach was employed in the periorbital region. HIFU energy was delivered at a depth of 1.5 millimeters with 0.2 joules (J) per pulse and a spacing of 0.7 millimeters between pulses. This targets the superficial musculoaponeurotic system (SMAS) just beneath the skin, aiming to improve skin texture and elasticity in this delicate area. Two-pass approach was utilized in the lower third of the face to address deeper tissue laxity and promote collagen stimulation. The first pass targeted the deeper SMAS layer at a depth of 4.5 millimeters, delivering 1.2 J of energy per pulse. The second pass focused on the subcutaneous tissue at a depth of 3 millimeters with 0.8 J per pulse. A hashtag pattern ensured uniform coverage across the treatment area, maximizing the therapeutic effect. Poly-L-Lactic Acid (PLLA) was strategically injected using a cannula for minimal tissue disruption. A modified vector technique was employed to ensure optimal placement and minimize risk of complications. Skinboosters were applied to the mid-face, specifically targeting areas prone to dehydration and fine lines. A total of 0.5 ml was injected on each side of the face, with precise 0.01 ml aliquots deposited every 1 centimeter. This technique ensures optimal distribution of the hydrating properties of the skinbooster throughout the mid-face region.

Results: Assessment of the patient's progress revealed significant improvements in facial contours. 3D stereophotogrammetry confirmed a noticeable lift in the temporal, middle, and lower thirds. Ultrasound evaluation demonstrated increased echogenicity (tissue density) throughout the superficial subcutaneous layer and signs of tightened fibers (compaction) in the middle and lower thirds. Additionally, the dermal thickness at the gonial and malar angles showed a slight increase. The patient also reported a substantial improvement in skin quality.

Conclusions: This case report highlights the potential benefits of combining HIFU, PLLA, and Skinboosters for non-surgical facial rejuvenation in men. The synergistic approach addresses various aspects of aging, promoting collagen production (PLLA), enhancing hydration (Skinboosters), and inducing tissue tightening (HIFU). Further studies are warranted to establish long-term efficacy and optimal treatment protocols for men seeking rejuvenative solutions.

References:Contini M, Hollander MHJ, Vissink A, Schepers RH, Jansma J, Schortinghuis J. A Systematic Review of the Efficacy of Microfocused Ultrasound for Facial Skin Tightening. *Int J Environ Res Public Health*. 2023 Jan 13;20(2):1522. doi: 10.3390/ijerph20021522. PMID: 36674277; PMCID: PMC9861614. Salavastru C, Fritz K, Tiplica GS. Hochintensiver fokussierter Ultraschall zur Hautstraffung [High intensity focussed ultrasound for skin tightening]. *Dermatologie (Heidelberg)*. 2023 Oct;74(10):748-752. German. doi: 10.1007/s00105-023-05198-3. Epub 2023 Aug 16. PMID: 37582825. Pavicic T, Ballard JR, Bykovskaya T, Corduff N, Hirano C, Park JY, Saromytskaya A, Sevi J, Vasconcelos S. Microfocused ultrasound with visualization: Consensus on safety and review of energy-based devices. *J Cosmet Dermatol*. 2022 Feb;21(2):636-647. doi: 10.1111/jocd.14666. Epub 2021 Dec 24. PMID: 34951735; PMCID: PMC9305832. Hart DR, Fabi SG, White WM, Fitzgerald R, Goldman MP. Current Concepts in the Use of PLLA: Clinical Synergy Noted with Combined Use of Microfocused Ultrasound and Poly-L-Lactic Acid on the Face, Neck, and Décolletage. *Plast Reconstr Surg*. 2015 Nov;136(5 Suppl):180S-187S. doi: 10.1097/PRS.0000000000001833. PMID: 26441097. Friedmann DP, Fabi SG, Goldman MP. Combination of intense pulsed light, Sculptra, and Ultherapy for treatment of the aging face. *J Cosmet Dermatol*. 2014 Jun;13(2):109-18. doi: 10.1111/jocd.12093. PMID: 24910274.

Submitter
Varela Rud
rud_varela@hotmail.com - Brazil

Presenter
Rud Machado Varela
rud_varela@hotmail.com -

#8592

Single-Session Multi-Modality Injections for Facial Rejuvenation in a Female

45 - Combination treatments

Rud M

Background/Objectives: Facial aging is a multifaceted process characterized by a progressive decline in essential structural components. This includes a decrease in collagen, a protein responsible for skin elasticity and firmness; elastin, another protein contributing to skin's recoil; and glycosaminoglycans, which provide skin with hydration and volume. Additionally, facial muscle atrophy (weakening), fat pad resorption (diminishment), and skeletal involution (bone structure changes) all contribute to the visible signs of facial aging. Minimally invasive aesthetic procedures, such as hyaluronic acid (HA) fillers, botulinum toxin injections, and collagen stimulators, have emerged as safe and effective solutions for facial rejuvenation with minimal recovery time. This case report describes a single-session, multi-phased injectable approach employed on a 45-year-old female marathon runner seeking facial rejuvenation.

Methods: The patient presented with advanced signs of facial aging, including sagging, volume loss, hyperpigmentation, and wrinkles. Due to travel constraints, a single-treatment approach was necessary. Treatment: Botulinum Toxin: Injections targeted the frontalis, corrugator, procerus, nasalis, orbicularis oculi, and platysma muscles. Hyaluronic Acid : Mid-facial injections targeted the medial malar and pyriform fossa regions. A cannula technique was used for the nasolabial folds. The mandible received a gonial angle bolus and a mandibular body retroinjection. Lips, labial grooves, and the chin area completed treatment. Skinbooster: The periorbital area received cannula injections of microboluses (0.01 ml) spaced approximately 1 cm apart. Poly-L-Lactic Acid : Three vials were used. Application began on the upper third of the face using the vector technique. Supraperiosteal needle injections followed at specific points in the lateral malar, prejowl, and mandibular regions. Finally, the anterior temporal region and mid-face received PLLA injections with cannula. The patient was re-evaluated 60 days after treatment.

Results: Significant improvements were observed in frontal, glabellar and periorbital wrinkles. The mid-face displayed improved structure, tissue repositioning and reduced wrinkles. Additionally, the infraorbital region showed improved pigmentation, reduced laxity, and enhanced hydration. The lower face presented with a redefined.

Conclusions: This case report demonstrates the effectiveness of a single-session, multi-phased injectable approach for facial rejuvenation in a marathon runner. Combining botulinum toxin, hyaluronic acid fillers, skinbooster, and poly-L-lactic acid resulted in significant improvements in wrinkles, facial volume, and overall skin quality.

References: Fitzgerald R, Bass LM, Goldberg DJ, Graivier MH, Lorenc ZP. Physiochemical Characteristics of Poly-L-Lactic Acid (PLLA). *Aesthet Surg J*. 2018 Apr 6;38(suppl_1):S13-S17. doi: 10.1093/asj/sjy012. PMID: 29897517. Munia C, Parada M, de Alvarenga Morais MH. Changes in Facial Morphology Using Poly-L-lactic Acid Application According to Vector Technique: A Case Series. *J Clin Aesthet Dermatol*. 2022 Jul;15(7):38-42. PMID: 35942018; PMCID: PMC9345188. Trinh LN, Gupta A. Non-Hyaluronic Acid Fillers for Midface Augmentation: A Systematic Review. *Facial Plast Surg*. 2021 Aug;37(4):536-542. doi: 10.1055/s-0041-1725164. Epub 2021 Mar 1. PMID: 33648015. Trinh LN, Gupta A. Hyaluronic Acid Fillers for Midface Augmentation: A Systematic Review. *Facial Plast Surg*. 2021 Oct;37(5):576-584. doi: 10.1055/s-0041-1724122. Epub 2021 Feb 25. PMID: 33634456. Trévidic P, Kaufman-Janette J, Weinkle S, Wu R, Dhillon B, Antunes S, Macé E, Maffert P. Injection Guidelines for Treating Midface Volume Deficiency With Hyaluronic Acid Fillers: The ATP Approach (Anatomy, Techniques, Products). *Aesthet Surg J*. 2022 Aug 1;42(8):920-934. doi: 10.1093/asj/sjac007. PMID: 35039828; PMCID: PMC9373948.

Submitter
Varela Rud
rud_varela@hotmail.com - Brazil

Presenter
Machado Varela Machado Varela
rud_varela@hotmail.com -

#8593

Sculp Gluteos: A Novel Approach to Gluteal Reshaping

50 - Body contouring & skin tightening

Machado Varela M

Background/Objectives: Gluteal augmentation procedures have become increasingly popular over the past few years as patients seek safe and effective ways to increase volume, improve contour and decrease laxity. Hyaluronic acid is a natural substance that can be used to increase volume and improve the contour of the buttocks. PLLA is a biodegradable and biocompatible and the effects result from a controlled, subclinical inflammatory response that induces type I collagen synthesis in tissues, increasing skin firmness and elasticity. Mesotherapy is becoming an effective alternative for treating localised fat. The aim of this study is to report our experience with the combined Shape & Contour technique, which combines hyaluronic acid, collagen stimulators and mesotherapy to improve the gluteal contour.

Methods: Three female patients aged 34-39 years presented with concerns regarding their gluteal region. Following individual evaluations, a personalized treatment plan incorporating a combination of techniques was developed for each patient: Mesotherapy for Localized Fat Reduction: 4 sessions of mesotherapy were performed at 15-day intervals, utilizing a cannula for increased patient comfort. The mesotherapy solution consisted of deoxycholic acid and phosphatidylcholine, specifically targeting localized fat deposits in the flanks, saddlebags, and banana fold areas. Hyaluronic Acid Fillers for Gluteal Volumization: 30 ml of hyaluronic acid fillers were injected into the upper gluteal quadrants using a cannula technique. The injection depth targeted the deep subcutaneous tissue, employing a vector-based approach with 1 ml retroinjections per vector. Additionally, hyaluronic acid was injected in the hip dip areas to address contour irregularities. Poly-L-Lactic Acid (PLLA) for Collagen Stimulation and Skin Quality: Two vials of PLLA were strategically injected to promote long-term volumization and improve overall skin quality in the gluteal region. After 90 days, all patients showed significant improvement in gluteal projection and volume. There was also a noticeable reduction in localized fat and improved skin quality.

Results: Sculp Gluteos technique demonstrated remarkable outcomes in patients seeking gluteal augmentation and body contouring. The treatment effectively addressed various concerns, resulting in significant improvements in gluteal shape, volume, and skin quality. Patients experienced a noticeable increase in gluteal volume, particularly in the upper gluteal quadrants. This volumization resulted in a more shapely and aesthetically pleasing contour. The targeted approach to fat reduction successfully addressed the hip dip areas, minimizing their appearance and creating a smoother, more contoured gluteal silhouette. The combination of PLLA and mesotherapy led to a significant improvement in skin laxity in the gluteal region. This resulted in a firmer, more youthful appearance of the skin.

Conclusions: In conclusion, the Sculp Gluteos technique offers a safe and effective option for gluteal augmentation and body contouring. By combining HA fillers, PLLA, and mesotherapy, it delivers immediate and long-lasting results, addressing both volume and skin quality while achieving a personalized approach for optimal patient satisfaction.

References:Haddad A, Menezes A, Guarnieri C, Coimbra D, Ribeiro E, Sarubi J, Avelar LE, Del Nero MP, da Cunha MG, Mazzuco R, Kamamoto C, Cazerta C. Recommendations on the Use of Injectable Poly-L-Lactic Acid for Skin Laxity in Off-Face Areas. J Drugs Dermatol. 2019 Sep 1;18(9):929-935. PMID: 31524350. Christen MO. Collagen Stimulators in Body Applications: A Review Focused on Poly-L-Lactic Acid (PLLA). Clin Cosmet Investig Dermatol. 2022 Jun 21;15:997-1019. doi: 10.2147/CCID.S359813. PMID: 35761856; PMCID: PMC9233565. Sarubi J, Guarnieri C, Del Nero MP, Kamamoto C, Honda M, Saito F, Haddad A. Targeted and Individualized Gluteal Poly-L-Lactic Acid Injection for Optimal Aesthetic Results in the Gluteal Region. J Clin Aesthet Dermatol. 2023 Jun;16(6):30-36. PMID: 37361362; PMCID: PMC10286883 Mortada H, Alkadi D, Saqr H, Sultan F, Alturaiki B, Alrobaiea S, Aljaaly HA, Arab K, Arkoubi AY. Effectiveness and Role of Using Hyaluronic Acid Injections for Gluteal Augmentation: A Comprehensive Systematic Review of Techniques and Outcomes. Aesthetic Plast Surg. 2023 Dec;47(6):2719-2733. doi: 10.1007/s00266-023-03458-0. Epub 2023 Jul 5. PMID: 37407710. Lourenço LM, de Noronha MGO, Colla LA, Izzo TR, Sigrist R, Braz A. LL body contour technique-A new way of gluteal contouring and augmentation with hyaluronic acid filler. J Cosmet Dermatol. 2022 May;21(5):1967-1972. doi: 10.1111/jocd.14763. Epub 2022 Jan 20. PMID: 35049130.

Submitter
Robredo-vitas Irene Gaile C.
irenegaile@gmail.com - Philippines

Presenter
Robredo-vitas Irene Gaile
irenegaile@gmail.com - Philippines

#8594

From Red to Radiant: Tailoring Laser treatments for Diverse Causes of Facial Redness in Pigmented Skin

49 - Lasers, EBDs & Light

Robredo-vitas I¹

¹Philippine Dermatological Society, Makati, Philippines

Background/Objectives: Facial redness in pigmented skin is a complex dermatological challenge, often manifesting uniquely as rosacea, facial flushing, vascular melasma, photoaging with visible capillaries, and post-acne erythema. This condition is prevalent yet frequently overlooked in patients with skin of color. This lecture will discuss effective strategies in diagnosing and treating these issues using laser technologies specifically the 577nm and the 1064nm/532nm vascular laser, which have shown safety and efficacy in targeting and alleviating these specific types of facial redness.

Submitter
Robredo-vitas Irene Gaile C.
irenegaile@gmail.com - Philippines

Presenter
Robredo-vitas Irene Gaile
irenegaile@gmail.com - Philippines

#8595

1927nm Thulium Laser: A Versatile Tool in Aesthetic Dermatology in Pigmented Skin

49 - Lasers, EBDs & Light

Robredo-vitas I¹

¹Philippine Dermatological Society, Manila, Philippines

Background/Objectives: The 1927nm thulium laser is a workhorse in my practice due to its safety and efficacy in treating skin of color. It not only rejuvenates the skin but also serves as a drug delivery system and is a key element in our combination treatment protocols for aesthetic dermatology. It reliably addresses a variety of dermatological issues, making it an indispensable tool for enhancing skin health and aesthetics in patients with darker skin tones.

Submitter
Robredo-vitas Irene Gaile C.
irenegaile@gmail.com - Philippines

Presenter
Robredo-vitas Irene Gaile
irenegaile@gmail.com - Philippines

#8596

Innovations in Non-Invasive Body Contouring: An Introduction and Comparative Review of Fat Reduction and Muscle Enhancement Technologies

50 - Body contouring & skin tightening

Robredo-vitas I¹

¹Philippine Dermatological Society, Manila, Philippines

Background/Objectives: In recent years, the demand for non-invasive body contouring solutions has surged, driven by advancements in technology and increasing patient interest in alternatives and adjuncts to surgical interventions. This lecture provides an introduction and comparative analysis of the latest technologies used for fat reduction and muscle enhancement. I will share my personal experiences with a range of cutting-edge modalities including Radiofrequency (RF) technology (both bipolar and unipolar), cryolipolysis, microwave technology for targeted fat reduction, and a combination of Electromagnetic Stimulation (EMS), RF, and Neurosensory stimulation for muscle enhancement.

Submitter
Lau Michael
michaelphlau@comcast.net - United States

Presenter
Michael Lau
MICHAELPHLAU@COMCAST.NET - United States

#8597

Multimodal treatment for cellulite

45 - Combination treatments

Michael L¹

¹IntimMed, PLLC, Edmonds, United states

Background/Objectives: Background: Cellulite, most frequently occurs in the thigh and buttock regions, are caused by multiple factors. It is very common, affecting over 80% of women, and yet we lack effective treatment for such. Many claims have been made regarding highly "effective" treatment by one single method, using devices or topical agents, albeit not so successfully. We are recommending a multimodal treatment approach for cellulite and have found more success. Summary: Multimodal treatment for cellulite utilizes several treatment modalities - mechanical, RF, regenerative, and topical agents/aesthetics- to address the individual causes of cellulite. Such multimodal approach is more effective than any single method of treatment. The multimodal treatment can be tailored for each patient, depending on the order of her major concerns - skin dimpling, orange-peel look, uneven skin contour, local skin inflammation etc. By understanding the pathophysiology and anatomical defects involved in causing the cellulite of the individual patient, an optimal combination of relevant treatment modes can be most cost-effective with longer term success in minimizing the look and feel of cellulite.

Submitter
Lim Ting Song
drlim@cliqueclinic.com - Malaysia

Presenter
Ting Song Lim
drlim@cliqueclinic.com -

#8598

Facial Overfilled Syndrome and Facial Interstitial Fibrosis: Pitfalls worth avoiding

48 - Complications - avoidance and management

Ting Song L

Background/Objectives: We look into the complications with fillers and biostimulators, and also energy based devices

Methods: Overfilling and overstimulation of collagen might not be the right approach in facial rejuvenation

Results: Overfilled Syndrome and Interstitial Fibrosis of the face will give long term complications to our patients

Conclusions: Prevention is better than cure. We look into ways of preventing these from happening.

Submitter
Pamela Ruri D
ruripamela@gmail.com - Indonesia

Presenter
Pamela Ruri Diah
ruripamela@gmail.com -

#8599

The Collagen Story: Direct Stimulation and Regeneration Using 675 nm Laser

49 - Lasers, EBDs & Light

Pamela R

Background/Objectives: Recent advancements in laser technology have paved the way for innovative skin rejuvenation techniques. The 675 nm laser diode, specifically targeting collagen as represents a significant breakthrough in non-invasive aesthetic treatments. Prior study investigates the direct effects of 675 nm laser irradiation on human dermal fibroblast cells, focusing on collagen synthesis and cell viability. Various doses of 675 nm irradiation were tested, revealing that while cell viability and proliferation remained unaffected, specific doses notably influenced collagen expression. By focusing on collagen as the primary target, the 675 nm laser offers a novel approach to non-invasive skin treatments, promising to revolutionize the management of skin rejuvenation and improved clinical outcomes.

Submitter
Pakkar-hull Anoob
anoobph@dermoaroma.com - United Kingdom

Presenter
Pakkar-hull Anoob
drpakkar@lailaesthetics.co.uk - United Kingdom

#8600

Bovine Colostrum Exosomes and Their Role in Regenerative Medicine

51 - Regenerative aesthetics

Pakkar-hull A

Background/Objectives: Exosomes have recently gained significant attention in the scientific community as a promising tool for regenerative medicine. Bovine colostrum, the first milk produced by cows postpartum, is a rich source of exosomes that exhibit remarkable cell growth and repair properties. Scientific studies have shown the efficacy and safety of bovine colostrum-derived exosomes in improving skin texture, tone, and elasticity, as well as in displaying potent anti-inflammatory properties. Since inflammation is a major contributor to skin aging, bovine colostrum-derived exosomes have emerged as a highly promising candidate for non-invasive, regenerative therapies for facial rejuvenation. Despite the need for further research to optimize their efficacy and safety, bovine colostrum-derived exosomes could play a central role in the exosome revolution in regenerative medicine. Dr. Anoob's Bio Dr. Anoob is a Medical Aesthetic Consultant with over 25 years of experience as an anaesthetist for the NHS. He specialises in providing safe, cutting-edge, medical-grade aesthetic treatments at private clinics in London and the UK. In addition to his clinical work, Dr Anoob is passionate about elevating standards in aesthetic medicine and is actively involved in teaching and training the next generation of aesthetic practitioners, frequently speaking at conferences and educational events in the UK and abroad. He is a KOL for DermoAroma and the Director of Dermoaroma's Aesthetic Medicine Training Academy. As Key Opinion Leader, Dr. Anoob represents DermoAroma internationally, engaging with the aesthetic medicine community, and educating them on Exosomes and Regenerative Aesthetics.

Submitter
Dekeyser Barry
barry.dekeyser@telenet.be - Belgium

Presenter
Dekeyser Barry
barry.dekeyser@gmail.com -

#8605

Use of Nd:YAG laser in bruise resolution following an injectable dermal filler procedure

48 - Complications - avoidance and management

Dekeyser B

Background/Objectives: Injectable dermal fillers are in high demand. Patients undergoing this treatment are frequently burdened by bruising in the days following the procedure. Bruises associated with dermal fillers usually resolve spontaneously within 10 to 14 days, but patients want shorter downtime. We present a case of a bruise treatment with Nd:YAG laser consisting of three sessions in two day intervals, where the bruise resolved after seven days from the start of laser treatment. To date, the reports on laser therapy for bruise resolution are mostly limited to intense pulsed light and pulsed dye laser, and this case report contributes to the demonstration of Nd:YAG laser efficacy for this indication.

Methods: A patient with Fitzpatrick III skin type came to the office to receive an injectable filler treatment, which consists of hyaluronic acid filler placement in the deep dermal plane at the zygomatic region. The practitioner decided to use a cannula technique in favour of a sharp needle since this is the preferred technique in case of patients prone to bruise formation or prolonged bleeding. The cannula technique is safe and tolerable. To make an entry point for the 25-gauge cannula, a relatively large 23-gauge puncture needle is used. By puncturing the skin, a blood vessel was hit by the needle. Subcutaneous bleeding occurred immediately that resulted in a bruise. The procedure was stopped, and firm pressure was applied for several minutes. Vitamin K cream (Auriderm XO) was applied for 24 hours to reduce the bruise formation. Ice was recommended for 24 hours. At follow-up consultation after 3 days the bruise showed no signs of resolution. To aid in bruise resolution laser therapy was employed on the 4th day after the initial dermal filler procedure. Patient was treated with 2-3 passes of 1064 nm Nd:YAG laser with the R33 handpiece (Fotona, Slovenia) and the following settings: 4mm spot size, 20 J/cm² fluence, 0.6 msec pulse duration and 2 Hz frequency. Cooling (Zimmer Cryo 5, Zimmer MedizinSystems, USA) was applied during the procedure. Treatment was repeated 3 times in 2-day intervals. The patient was monitored for adverse effects and pain associated with laser therapy.

Results: The bruise resolved gradually in the course of treatment, as seen in the photographs documenting the case

Conclusions: Low intensity short pulse Nd:YAG 1064 nm laser showed efficacy in reducing the bruise resolution time without any adverse effects. More cases would be needed to establish the optimal protocol of this promising therapy.

Submitter
Sarmiento Richard Nicomedes
giselatrajanosarmiento@gmail.com - Philippines

Presenter
Trajano-sarmiento Gisela
giselatrajanosarmiento@gmail.com -

#8606

Say Goodbye to the Panda Eyes & Raccoon Eyes

51 - Regenerative aesthetics

Trajano-sarmiento G

Background/Objectives: Dark circles are a very common skin concern that affects people of all ages. Since the skin under the eyes is very thin and delicate, the underlying blood vessels may become more visible over time, which can contribute to the appearance of dark circles. Recognizing the cause can be a great start to figuring out how to treat them and reduce their appearance, our experts say. A few common causes of under-eye circles include genetics, aging and environmental factors. Some people may also naturally have darkness or hyperpigmentation under the eyes, and those may look more severe for people with fairer skin tones, according to our experts. One of the most common causes associated with dark under-eye circles are lifestyle factors, including drinking a lot of alcohol, not eating a well-balanced diet and lack of sleep, which can significantly contribute to puffiness under the eyes. Not properly caring for the under-eye area can also play a role. Aging is also one of the leading causes of dark under-eye circles. Over time, the tissue around the eyes weakens, as one gets older, one loses collagen and volume. This volume loss can lead to changes that appear as dark circles as a result of the increased shadow effect. The eyelid skin is so thin and delicate that the underlying blood vessels may become more visible over time and can make dark circles appear worse. Cosmetic procedures are the most effective way to treat dark circles. Since there are more than a thousand treatments in the field of aesthetics which presents with various multi-tasking results, there is always a task to search for one of the most reliable procedures which offers sustainable longevity-evident results. This lecture will present a multi-modal approach in addressing Dark circles. The discussion will cover devices like Deep RF heat, Platelet Rich plasma, Plasma purisma, OPT laser, Skin Injectors. In addition, latest world-craze treatments such as Exosomes, Cellular treatment factors, antioxidants, hyaluronic acid, biostimulators and bio-remodeling agents will also be presented.

Submitter
Sarmiento Richard Nicomedes
giselatrajanosarmiento@gmail.com - Philippines

Presenter
Trajano-sarmiento Gisela
giselatrajanosarmiento@gmail.com - Philippines

#8607

STILL MY CUP OF T – THREADS ... To Turn Back the Hands of Time

46 - Threads

Trajano-sarmiento G¹

¹Skeen Face and Body Anti-Aging Centre, Muntinlupa, Philippines

Background/Objectives: As one ages, the skin begins to suffer minor downward gravitational effects, and the face starts to become more “bottom heavy”. This causes visible skin laxity and facial sagging. Skin laxity occurs when the skin loses its firmness and structure. Since there are more than a thousand treatments in the field of aesthetics which presents with various multi-tasking results, there is always a task to search for one of the most reliable procedures which offers sustainable longevity-evident results. The non-surgical thread lift is one of the most amazing, popular choice by a lot of aesthetics surgeons globally. A non-surgical face lift with threads, also known as a thread lift or a PDO thread lift, is a popular cosmetic procedure designed to lift and tighten sagging facial tissues without the need for surgery. A thread lift is a type of procedure wherein temporary sutures are used to produce a subtle but visible “lift” in the skin. Instead of removing the patient's loose facial skin surgically, the cosmetic surgeon simply suspends it by stitching up portions of it. This provides a natural-looking rejuvenation and can address various concerns, such as loose skin, wrinkles, and facial contours. During the procedure, thin threads made of a dissolvable material called polydioxanone (PDO) are inserted under the skin using fine needles. These threads act as a supportive structure, lifting and repositioning the skin and underlying tissues to create a more lifted and youthful appearance. The threads used in a non-surgical face lift stimulate collagen production, which helps improve skin strength and elasticity over time. One of the advantages of a non-surgical face lift with threads is that it's a minimally invasive procedure with little downtime. Most people can return to their normal activities within a few days. Results can be seen immediately after the procedure, and they continue to improve over several months as collagen production increases. Many aesthetics physicians would mix and match variety of treatments and have seen variations in results amongst the many procedures globally tried. And that despite the many results, with regards to the threads, as it is dissolved they are replaced by body's own collagen, providing long-term benefits. Thus, thread lift has been for more than a decade became an integral component of youthful boosting collagenesis. This lecture will present the advantage of performing thread lifts from the basic of mono threads, followed by a better lift through cannula COG technology, and lastly enhancing better results through the use of suspension threads. This will also present cases of various patients with follow-up as far as seven (7) years.

Submitter
Sarmiento Richard Nicomedes
giselatrajanosarmiento@gmail.com - Philippines

Presenter
Trajano-sarmiento Gisela
giselatrajanosarmiento@gmail.com - Philippines

#8608

The Era of Injectable Anti-Aging Formula for Face, Chin, Neck, Hands, Fingers Biorevitalization

51 - Regenerative aesthetics

Trajano-sarmiento G¹

¹Skeen Face and Body Anti-Aging Centre, Muntinlupa, Philippines

Background/Objectives: Aging is inevitable. As one focuses on the face area with multi-tasking modalities, it comes with a sweet surprise that one just realizes and notices that neglected areas such as chin, neck, hands and fingers. These areas are sure tell-tale of the chronological age if an individual would left these untreated. Aesthetic Treatments are all about enhancing natural beauty. Sometimes called cosmetic treatments they are non-invasive, painless and require no downtime. They come in many forms including injectable and topical treatments. Aesthetic treatments are power treatments that help make patients feel good inside and out. This lecture will present multifaceted treatments on how to address the aging signs of the face, chin, especially the neglected areas of the neck, hands and fingers. Incredible new 64mg skin booster which is 32mg high molecular weight HA plus 32mg low molecular weight HA is an injectable anti-aging treatment formulated with hyaluronic acid, specifically designed to address the loss of elasticity and firmness in aging skin. This Ideal for clients wanting strong hydration and bio-revitalization of the dermis. Administered either with 5 point or 10 point technique, or micro-injections from which the product is smoother to inject with insane results. To Refresh and rejuvenate skin, an innovative dermal filler clinically proven to reduce signs of aging. This injectable treatment utilizes stabilized hyaluronic acid to instantly plump skin, erase wrinkles, and restore lost volume. Safe and effective for the face and body, provides natural-looking contouring that smooths away smile lines, crow's feet, and deep facial wrinkles. Other treatments will involve the use of polynucleotides, exosomes skin boosters, biostimulators, and bioremodellors.

Submitter
Sarmiento Richard Nicomedes
giselatrajanosarmiento@gmail.com - Philippines

Presenter
Trajano-sarmiento Gisela
giselatrajanosarmiento@gmail.com - Philippines

#8609

EXOSOMES. THE AGE-OLD AGE ISSUE... Remodeling the Rules for Aging Gracefully

51 - Regenerative aesthetics

Trajano-sarmiento G¹

¹Skeen Face and Body Anti-Aging Centre, Muntinlupa, Philippines

Background/Objectives: The breakthrough is one of the most exciting modalities in the medical and aesthetic world today. It is a state-of-the-art material that is attracting attention not only in cosmetics but also in the therapeutic field. Exosomes becomes as cutting-edge as it gets. These are signaling messengers from stem cells and have a whole host of potential benefits and applications, especially for skin health. In fact all aspects of skin health improve with exosome therapy. Loss of elasticity, skin relaxation, wrinkles and a rough appearance are typical of skin aging, the phenomenon of skin aging. How to fight it? Stem cells can restore the skin's former appearance by acting as real collagen and elastin factories, eliminating the limits of botox and fillers. With exosomes it can boost the facial's natural healing, especially when delivered deeply into the skin. The skin will be able to rebuild itself in a natural, healthy way from the inside out. This new frontier of exosome skin rejuvenation, can increase skin collagen in the treated areas by up to six-fold and increases elastin levels by up to 300%. Exosome science to erase skin aging as it is structurally very stable, so it is not easily destroyed or decomposed, and it can easily pass through biological barriers that are difficult to deliver with conventional delivery systems. It has high biocompatibility, low toxicity, and has the advantage of avoiding immune reactions. This lecture will discuss the multifaceted application on the use of Exosomes on the face, scalp, hair re-growth, eyebags, neck, hands, and wound healing

Submitter
Sarmiento Richard Nicomedes
giselatrajanosarmiento@gmail.com - Philippines

Presenter
Trajano-sarmiento Gisela
giselatrajanosarmiento@gmail.com -

#8610

Multifaceted Treatments of Biostimulators and Bio-remodelling agents for the Bodily Areas such as Hands, Fingers, Neck, and Butt Augmentation

51 - Regenerative aesthetics

Trajano-sarmiento G

Background/Objectives: The Aging of the Hands, Fingers, Neck and Buttock/Bottom area. What is the commonality amongst these bodily areas ? It is the loss of moisture and elasticity and deterioration of skin condition such as flabbiness, the appearance of signs of wilting of the skin, Lipoatrophy, assymetry, presence of stretchmarks, all of which leads to wrinkling, and loss of volume. This lecture will present how to address the various look of bodily aging with innovative biotechnology restoring youthful vitality by utilizing Polylactic Acid (PLA) and Hyaluronic Acid. These are safe, approved, popular and in-demand modalities that is non-surgically injected deep into the skin's surface, providing targeted safe and effective bio-lifting action. Furthermore it provides to transform the look of aging skin revealing remarkably smoother, firmer, more youthful looking skin. The result that does not only replenishes volumes, but also activates the growth of its own collagen from which the formation of its own collagen is the basis for a young and radiant skin.

Submitter
Sarmiento Richard Nicomedes
giselatrajanosarmiento@gmail.com - Philippines

Presenter
Trajano-sarmiento Gisela
giselatrajanosarmiento@gmail.com - Philippines

#8611

Lips that Defines You

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Trajano-sarmiento G¹

¹Skeen Face and Body Anti-Aging Centre, Muntinlupa, Philippines

Background/Objectives: Thanks to filters on our social media apps, one get a chance to see how one would look if one were to change its facial features. As one age, we always look for ways to reverse the aging process by using lip injections, facial fillers, and more. And thanks to modern science and technology, minimally invasive cosmetic procedures take little to no recovery time so that one can get back to life with minimal scarring and a brand new face. Everyone's lips are unique to their own face, but often one is unhappy with it's lip shape and use makeup liners and other tricks to enhance them without surgery. Thus, Lip augmentation procedures can be an easy way to improve the appearance of one's lips without constantly overlining them. It is one of the most popular cosmetic procedures done because full lips are considered youthful and voluptuous. Cosmetic lip augmentation consists of the enlargement and reshaping of otherwise normal lips to improve their dimensional relation with the patient's nose, teeth, and surrounding facial structures. The appearance of the lips is determined by the spatial relation of the lip structures with the teeth in a 3-dimensional space and by their function during animation and speech. This lecture will present technique utilizing smaller volume of a dermal filler placed in more parts of the lips. Instead of injecting into the lips a larger volume of a dermal filler and then massaging and spreading it out, the technique injects more areas of the lips with a lesser volume of product. Lip fillers can add volume, improve symmetry, and define the lips' borders, creating a more aesthetically pleasing appearance.

Submitter
Ali Kashif
kashif@drkashif.uk - Pakistan

Presenter
Ali Kashif
kashif@drkashif.uk - Pakistan

#8619

The Era of Exosomes in Regenerative Medicine- Exosome vs PRP in Androgenetic Alopecia

52 - Hair restoration

Ali K¹, Stoilova I

¹Khyber Medical University , Peshawar, Pakistan

Background/Objectives: Androgenetic alopecia (AGA) or male pattern baldness is characterized by reduction of the hair follicles gradually causing conversion of terminal hairs into vellus hair, leading to progressive reduction of the density of hair on the scalp. The aim of this study to compare the results of injections of platelet-rich plasma (PRP) and platelet-rich plasma (PRP) in combination with stromal vascular fraction (SVF), which is rich in adipose-derived stromal cells (with a potential in modulating hair growth cycle) in the upper scalp for the treatment of AGA.

Methods: In this study, 220 adult patients presenting with male pattern baldness were included. Patients were divided into two groups. Group 1 containing 110 patients received plain Platelet-Rich-Plasma (prp) treatment, while the second group was treated with PRP in combination with exosomes. Over the course of the study, a total of 6 sessions were conducted, with each session spaced 4 weeks apart. The results were assessed at the baseline, after 4th session, and 1 month after 6th session. Pre and post trichoscopy images were taken. The assessment of outcomes included both re-injection and changes in hair density at 6 and 12 weeks after injection. The evaluation of changes in the density was conducted using ultra high-resolution photography

Results: Hair density was significantly increased after 6 weeks and 12 weeks post injection were seen with platelet-rich plasma (PRP) in combination with exosomes. In hair-to-hair matching analyses, new hair grew from active follicles. Furthermore, nonfunctioning hair follicles filled with hyperkeratotic plugs, up to today assumed incapable of forming new hair, proved to grow new hair. No side effects were noted after treatment

Conclusions: Intra dermal administration of platelet-rich plasma in combination with exosomes showed significant increase in hair density, improves hair regrowth within 6 to 12 weeks. Overall, exosomes hold promise in influencing the hair growth cycle and may serve as a potential therapy in AGA.

References: Hassan, L., Samin, K. A., Mohsin, S., Asif, M. I., Maheshwary, N., & Ahmed, A. (2024). Compare the Efficacy of PRP Intervention VS Exosomes for Hair loss, a Case Series Study. *Dermis*, 4(3), 1-7. Vyas KS, Kaufman J. (2023). Exosomes: the latest in regenerative aesthetics. *Regen Med*. 18(2):181-194.

Submitter
Menon Nisha
dr_nishamenon@hotmail.com - United Kingdom

Presenter

-

#8627

Enhance results and revenue with combination therapy.

45 - Combination treatments

Background/Objectives: background

Submitter
Menon Nisha
dr_nishamenon@hotmail.com - United Kingdom

Presenter
Nisha Menon
dr_nishamenon@hotmail.com -

#8628

The Benefits of Offering Combination Treatments : Improved Patient Outcomes and Increased Revenue

73 - Marketing & Practice management

Nisha M

Background/Objectives: Aesthetic medicine is a very rapidly growing sector, with more and more treatments entering the market it is vital we evolve our practices to meet the growing demand of these procedures. In the recent years combination therapy has gained popularity, providing a synergistic approach to aesthetic enhancement. By way of integrating various treatment modalities, clinics can achieve superior patient outcomes while simultaneously boosting their revenue. Improved patient outcomes Offer a holistic approach While patient might be initially coming in for anti-wrinkle injections, it is important to educate them on skin care and skin health, where this can be addressed by combining chemical peels, micro-needling or lasers skin rejuvenation treatments. *Personalised solution Combining treatments will ensure that each patient is receiving treatments that will address their condition in best possible way, eg: acne scars- A combination of skincare, micro needling+/- PRP, laser resurfacing (ablative) can all in combination offer a better solution than just a single modality. * Enhanced Outcomes Combining various modalities enhances the results for the patients eg: laser skin rejuvenation followed up with skin boosters and neurotoxins can give a great outcome for a patient as opposed to having only toxins. This improves the skin health on a long term basis offering better value for their money. * Reduced downtime Combining treatments means patients spend less time healing eg: combining radio frequency micro-needling with laser resurfacing on a same sitting means patients don't have multiple recovery period to factor in their busy schedule as the downtime can be combined into a single procedure. This also means various concerns can be addressed within a single session or a planned sequence. Increased revenue for the clinic. *High value treatment bundles Combining multiple modalities means the clinic can charge a higher value due to the complexity and added value that is offered to the client. This allows the clinic to generate more revenue per patient as opposed to a single treatment and save time to have more appointments. *Increased patient retention Satisfied patients are more likely to return for more treatments or maintenance sessions, this also means more referrals to the clinic, adding revenue. There are still very few clinics offering subscription programmes and bundles and this can be a new addition to increase ongoing revenue and retain patients. *Stand out from competitorsIntroducing combination treatments can differentiate a clinic from it's competitors, attracting new patients seeking comprehensive solutions. Marketing these appropriately can position the clinic as a leader in innovation and aesthetics. This will also attract a broader clientele. *Maximise use of resources and staff Offering combination therapy would mean using all the resources which in some cases an individual treatment device might not be that popular, this will ensure devices are used to its capacity to generate more income. This will also ensure staff allocation and time are used to the best, reducing idle time for the practitioner and equipments. This will lead to higher productivity and profitability.

Submitter
Menon Nisha
dr_nishamenon@hotmail.com - United Kingdom

Presenter
Nisha Menon
dr_nishamenon@hotmail.com -

#8629

The Age of Ageless- Merging Aesthetics with Longevity Science

73 - Marketing & Practice management

Nisha M

Background/Objectives: Longevity medicine is an advanced personalised preventative medicine powered by deep biomarkers of ageing and longevity. In an era where we need to focus more on our health span than life span, aesthetic industry offers us a great opportunity to embrace and combine aesthetics and longevity to offer the ultimate combo for patients. It is great to live till 100 but less so if you live your last 30 years are in poor health. Globally, life expectancy has increased by more than 6 years between 2000 and 2019 from 66.8 to 73.4 as per WHO. There are also reports showing an increase in healthy life expectancy by 8%. With Hong kong, Macao and Japan leading the way to be the top three countries in the world to be ranked by life expectancy. The rest of the world can learn valuable lesson from the Asian aesthetic and wellness market, particularly its integration of traditional practices with modern science. The region's emphasis on preventative care and maintaining overall health encourages proactive health management. Asia's rapid adoption of innovative cutting edge technologies and personalised treatments highlights the importance of staying at the forefront of advancements positioning Asia as a global leader in this field. The global longevity market is experiencing significant growth with an estimated projection of \$600 billion by 2025. The market encompasses various sectors, including pharmaceuticals, nutraceuticals, regenerative medicine and advanced medical technologies aimed at extending health span. The field of aesthetics and longevity have traditionally operated separately, with aesthetic medicine focusing on enhancing physical appearance and longevity medicine aiming to extend health span and delay the onset of age-related diseases through interventions like laser and light therapy, Hyperbaric Oxygen therapy, HRT, NAD ,IV infusions, regenerative medicine, leveraging genetic and molecular profiling and lifestyle modifications. Integrating these two disciplines can provide a holistic approach to patients care, addressing both external and internal health. There is an increasing demand for comprehensive wellness solution that promotes overall well-being and quality of life.

Submitter
Menon Nisha
dr_nishamenon@hotmail.com - United Kingdom

Presenter
Nisha Menon
dr_nishamenon@hotmail.com -

#8630

A Promising Solution for Hidradenitis Suppurative

49 - Lasers, EBDs & Light

Nisha M

Background/Objectives: Hidradenitis Suppurativa (HS) is a chronic inflammatory skin condition characterised by lesions, deep seated painful nodules and abscesses, draining tract and fibrotic scars. These lesions most commonly occur in intertriginous areas and areas rich in apocrine glands, such as axillae, groin, perianal and perineum and inframammary locations. Because of the associated pain, sensitive locations, drainage, odour, and scarring, this condition may have a negative psychosocial impact. This article highlights the role of laser hair reduction and how it can help in the management of hidradenitis suppurativa. Understanding Hidradenitis Suppurativa and hair follicles : HS is a debilitating condition with a complex pathophysiology involving follicular occlusion, inflammation, and bacterial colonisation. Hair follicles play a pivotal role in the pathogenesis of HS, as the blocked follicles trigger an immune response, leading to the formation of painful nodules and abscesses. Consequently, treatments aimed at reducing hair growth have been shown to alleviate symptoms and prevent disease progression . The role of Laser Hair removal Laser hair removal can reduce hair growth in the affected areas, thereby potentially mitigating the triggers of hidradenitis suppurativa. Several studies have demonstrated the efficacy of laser hair removal in managing Hidradenitis Suppurativa and indicates that laser therapy can lead to a significant reduction in disease activity, including a decrease in lesion count, pain, and drainage. Furthermore, patients often report improvements in quality of life, including reduced discomfort and enhanced self-esteem, following laser hair removal treatment. Additionally, compared to traditional methods such as shaving or waxing, laser hair removal offers longer-lasting results, with the potential for prolonged remission of HS symptoms. While laser hair removal is generally considered safe, it is essential to consider potential risks and complications, particularly in individuals with Hidradenitis Suppurativa. Skin sensitivity and the presence of active lesions may increase the risk of adverse effects such as pain, erythema, and blistering. Triple wavelength lasers, also known as multi-wavelength or combination lasers, utilise a combination of three distinct wavelengths of light to target different components of the hair follicle: melanin, hemoglobin, and water. These wavelengths typically include Alexandrite (755nm), Diode (810nm), and Nd:YAG (1064nm). By incorporating multiple wavelengths, these lasers can effectively target a wider spectrum of hair colors and depths, making them suitable for various skin types and conditions. The Alexandrite wavelength primarily targets melanin, which is abundant in the hair shaft, while the Diode wavelength penetrates deeper into the follicle, targeting melanin in the hair bulb. The Nd:YAG wavelength has a higher affinity for hemoglobin and water, enabling it to reach deeper follicles and treat finer, lighter hairs. By combining these wavelengths, triple wavelength lasers can achieve comprehensive and precise hair removal across a diverse range of hair and skin types. Triple wavelength lasers have found wide-ranging clinical applications beyond traditional hair removal , including the treatments of other chronic skin conditions such as pseudofolliculitis barbae and hirsutism Clear explanation of its existing or impending impact and implications on the practice of aesthetic medicine.

Submitter
Menon Nisha
dr_nishamenon@hotmail.com - United Kingdom

Presenter
Nisha Menon
dr_nishamenon@hotmail.com -

#8631

The full Body Approach

73 - Marketing & Practice management

Nisha M

Background/Objectives: Background

Submitter
Menon Nisha
dr_nishamenon@hotmail.com - United Kingdom

Presenter
Nisha Menon
dr_nishamenon@hotmail.com -

#8632

The full Body Approach

49 - Lasers, EBDs & Light

Nisha M

Background/Objectives: Backgroubnd

Submitter
Menon Nisha
dr_nishamenon@hotmail.com - United Kingdom

Presenter
Nisha Menon
dr_nishamenon@hotmail.com -

#8633

Skin Analysis Device- A must have to enhance The Consultation process

73 - Marketing & Practice management

Nisha M

Background/Objectives: Background

Submitter
Gupta Prathamesh
prathameshsgupta@gmail.com - India

Presenter
Gupta Prathamesh
Prathameshsgupta@gmail.com - India

#8634

Thread Lifting in Aesthetic Medicine: A Comparative Analysis of Newer and Traditional Thread Materials

46 - Threads

Gupta P¹, Saha R²

¹Dr Marwah's skin clinic, Mumbai, India

²SkinLab, Bangalore, India

Background/Objectives: Thread lifting procedures have emerged as a popular minimally invasive method for facial rejuvenation. This study evaluates the effectiveness and safety of newer generation threads compared to traditional ones, focusing on the face and neck's topographic anatomy, including the ligament apparatus and superficial fat pads, in the context of aging. This abstract aims to present a meta-analysis of scientific evidence and clinical studies comparing patient outcomes with different thread materials. The goal is to emphasize the role of these materials in achieving predictable, long-lasting results with minimal patient downtime, discomfort, and long-term complications.

Methods: This study uses secondary research to conduct a meta-analysis of multiple studies on thread lifting materials, including PDO (Polydioxanone), PLLA (Poly L. Lactic Acid), PCL (Poly Caprolactone), and PLCL (Poly L. Caprolactone Lactic Acid). The study examines how the choice of material affects clinical outcomes and maintenance. ****Materials Overview:**** 1. ****PDO (Polydioxanone):**** - Degradation time: 6-12 months - Elastic modulus: 1.0-3.45 GPa - Tensile strength: 27.6-50 MPa - Tensile elongation: 2-10% 2. ****PLA (Polylactic Acid):**** - Degradation time: 12-16 months - Elastic modulus: 0.35-3.5 GPa - Tensile strength: 21-60 MPa - Tensile elongation: 2.5-6% 3. ****PCL (Polycaprolactone):**** - Degradation time: > 24 months - Elastic modulus: 0.21-0.44 GPa - Tensile strength: 20.7-42 MPa - Tensile elongation: 300-1000% 4. ****PLCL (Polylactic Acid-Polycaprolactone blend):**** - Degradation time: 3 months - Elastic modulus: 1.0-4.34 GPa - Tensile strength: 41.4-55.2 MPa - Tensile elongation: 2-10% These properties influence their suitability for various applications in thread lifting procedures.

Results: The comparative analysis highlights the following key differences: - ****PDO**** offers moderate tensile strength and a faster degradation rate, making it suitable for applications requiring quicker absorption. - ****PLA**** provides a balance of tensile strength and degradation rate, suitable for more extended support. - ****PCL**** has the slowest degradation rate and highest tensile elongation, providing long-lasting support but less tensile strength. - ****PLCL**** combines properties of PLA and PCL, offering a controlled degradation rate and decent tensile strength, suitable for versatile applications.

Conclusions: PLCL appears to be the best material for thread lifting, offering a balanced degradation rate and tensile strength. However, the specific application requirements should guide the material choice.

References: Van de Velde, K.; Kiekens, P.; Biopolymers: overview of several properties and consequences on their applications., Polymer Testing, 2002, 21: p. 433-442. Liao, S.; Chan, C.K.; Ramakrishna, S.; Stems Cells and Biomimetic Materials Strategies for Tissue Engineering, Materials Science and Engineering C, 2008, 28: p. 1189-1202. Hill, C.R., An Introduction to Chemical Engineering Kinetics and Reactor Design, 1977, New York: John Wiley and Sons. Li, S.; Garreau, H.; Vert, M.; Structure-property relationships in the case of the degradation of massive aliphatic poly (α-hydroxyacids) in aqueous media. Part 2: degradation of lactide/glycolide copolymers: PLA37.5GA25, and PLA75GA25. J Mater Sci, Mater Med, 1990, 1: p. 131-139. Bellenger, V., Ganem, M.; Mortaigne, B.; Verdu, J., Lifetime prediction in the hydrolytic ageing of polyesters, Polymer Degradation and Stability, 1995, 49: p. 91-7. Farrar, D.F.; Gilson, R.K.; Hydrolytic degradation of polyglyconate B: the relationship between degradation time, strength and molecular weight. Biomaterials, 2002, 23: p. 3905-3912. Ward, I., Mechanical properties of solid polymers, 2nd ed. 1983, Chichester, UK: Wiley & Sons.

Submitter
Janovska Jana
j.a.janovska@gmail.com - Latvia

Presenter
Janovska Jana
j.a.janovska@gmail.com -

#8635

CIRCADIAN SKIN IS A REALITY

62 - Anti-aging & integrative medicine

Janovska J

Background/Objectives: Introduction: Circadian rhythms coordinate the physiology of an organism with the light–dark environmental variation caused by the rotation of the earth. Most organisms have some form of circadian regulation, making it one of the most ubiquitous regulatory pathways discovered to date (Vivek Kumar et al, 2013). Both good sleep and caloric intake are essential for survival and health. Sleep disorders are often comorbid with psychiatric diseases, and both may significantly affect daytime functioning and quality of life (Marilou DP Tromp et al. 2016). Historically, work on peripheral circadian clocks has been focused on organs and tissues that have prominent metabolic functions, such as the liver, fat, and muscle. In recent years, skin has emerged as a model for studying circadian clock regulation of cell proliferation, stem cell functions, tissue regeneration, aging, and carcinogenesis (Verster JC et al 2008). Several studies focused on the relationship between body mass index (BMI) and sleep disorders (Meyer KA et al 2012). The skin takes the brunt of damage from the harmful radiation emitted by the sun and is constantly exposed to toxins and abrasive injuries. The outmost layer of the skin, the epidermis, comprises a stratified squamous epithelium that is maintained by proliferating stem and progenitor cells residing in the basal cell layer (Janich P et al, 2013). Over 50 years ago, it was observed that cell proliferation in the skin occurs in a circadian manner. The evolutionary advantage underlying the circadian clock regulation of cell proliferation in the epidermis remains unclear, but it could relate to improved function of progenitor and stem cells when DNA replication is temporally separated from the maximum generation of reactive oxygen species from oxidative phosphorylation (Geyfman M et al, 2013). Eventually day guard is Serotonin, synthesized from L-tryptophan in gastrointestinal tract and central nervous system. Night guard is melatonin, which is synthesized in brain epiphysis, lack of those hormones may impact premature skin aging and its biological function. We have analysed both Caucasian gender patients (n= 145), and decided as well in two groups with metabolic syndrome and without, regarding IDF (International Diabetic Federation). Body mass index, and abdominal circumference were done. Questioner involved DASH (Dietary Approaches to Stop Hypertension) diet criterion, which mostly were screened by daily food supplement and caloric restriction. Serotonin and melatonin containing products using daily was questioned and analysed. As well we have done correlation between metabolic syndrome patients and skin condition, and abdominal obese patients were examined clinically regarding skin condition (dyspigmentation, papillomatosis, elasticity, teleangiectasias on the face).

Submitter
Cabunac Zeljka
drzcabunac@yahoo.com - Serbia

Presenter
Cabunac Zeljka
drzcabunac@yahoo.com - Serbia

#8636

Morning lips technique

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Cabunac Z¹

¹SESIAM society, Belgrade, Serbia

Background/Objectives: The Morning Lips lip correction technique was developed with the idea of mimicking the effect of morning lip fullness. Upon waking up, the lips always appear slightly fuller due to swelling caused by lymphatic stasis. Despite the growing trend of lip augmentation with hyaluronic acid, sometimes women have a strong aversion to seek any form of correction. The most common reason is the fear of significant and excessive lip enlargement, unnatural results, and subsequent dissatisfaction. The specificities of the Morning Lips lip correction technique, focusing on minimal lip volume enhancement and improvement of lip texture, have encouraged many clients to seek this type of intervention, primarily because they are confident that lip enlargement will be minimal, providing the desired effect of morning fullness that is familiar and appealing to them. The approach for Morning Lips is individualized and depends on the initial size and shape of the lips. For patients with previously well-shaped and voluminous lips, a horizontal hyaluronic acid application technique will predominate. In cases where patients have smaller lip volume and may require lip shape correction, the vertical technique is more dominant. Successful implementation of all application techniques requires a thorough understanding of anatomy, artistic eye, and skilled professional hands. The Morning Lips lip correction technique has attracted numerous clients of all ages who desired subtle lip correction, but were too afraid of uncontrollable outcomes to undergo lip correction.

Submitter
Jose Eduardo Chicarelli Martin
eduardochicarelli10@gmail.com - Brazil

Presenter
Jose Eduardo Chicarelli Martin
eduardochicarelli10@gmail.com - Brazil

#8637

Regenerative Medicine and dermal fillers - where are we now?

51 - Regenerative aesthetics

Jose Eduardo C¹

¹ESSENCE CLINIQUE, São paulo, Brazil

Background/Objectives: Regenerative aesthetics is an emerging branch of regenerative medicine with an important impact on dermatological clinical practice. Through its advancement in clinical research, we have been able to explore the potential that procedures have not only for rejuvenation, but also as a treatment for unsightly dermatoses, since its therapies aim to recover the structure and function of tissues, using the body's own systems. The aim of this study is to systematise the scientifically proven advances to date on the subject of collagen biostimulators and their immunology, positioning them in relation to their role in tissue regeneration.

Methods: This integrative review addressed a survey of review articles and clinical articles, involving the scientific experience of the main biostimulators and how their immunology impacts Regenerative Medicine, using the PubMed-MEDLINE/PMC (National Library of Medicine) database, during April and May 2024, using the following terms as keywords: "Regenerative Medicine; Fillers; Rejuvenation", with a publication time restriction of the period from 2022 to 2024.

Results: In this document, we present an overview of the field of regenerative aesthetics in relation to the main collagen biostimulators, their immunological impact on tissue regeneration and an overview of the scientific evidence supporting current therapeutic modalities, and how this understanding allows us to explore the potential of biostimulators beyond the scope of Cosmiatry.

Conclusions: There are differences between collagen stimulators, but to date there have been no standardised clinical studies to compare them in detail. Regenerative Aesthetics is fascinating, but still requires many studies involving tissue engineering work, to further explore the understanding of the inflammatory and neocollagenesis pathways, as well as optimising them and providing data that will allow doctors greater safety when using these products beyond the Aesthetic sphere, with an impact on clinical dermatoses as well.

References: AGUILERA SB, MCCARTHY A, KHALIFIAN S, LORENC ZP, GOLDIE K, CHERNOFF WG. The Role of Calcium Hydroxylapatite (Radiesse) as a Regenerative Aesthetic Treatment: A Narrative Review. *Aesthet Surg J*. 2023 Sep 14;43(10):1063-1090. doi: 10.1093/asj/sjad173. PMID: 37635437. CORDUFF N. Introducing aesthetic regenerative scaffolds: An immunological perspective. *J Cosmet Dermatol*. 2023 Mar;22 Suppl 1:8-14. doi: 10.1111/jocd.15702. PMID: 36988471. GOLDIE K. The evolving field of regenerative aesthetics. *J Cosmet Dermatol*. 2023 Mar;22 Suppl 1:1-7. doi: 10.1111/jocd.15556. PMID: 36988470. HADDAD S, GALADARI H, PATIL A, GOLDUST M, AL SALAM S, GUIDA S. Evaluation of the biostimulatory effects and the level of neocollagenesis of dermal fillers: a review. *Int J Dermatol*. 2022 Oct;61(10):1284-1288. doi: 10.1111/ijd.16229. Epub 2022 Apr 29. PMID: 35486036. MAZZUCO R, EVANGELISTA C, GOBBATO DO, DE ALMEIDA LM. Clinical and histological comparative outcomes after injections of poly-L-lactic acid and calcium hydroxyapatite in arms: A split side study. *J Cosmet Dermatol*. 2022 Dec;21(12):6727-6733. doi: 10.1111/jocd.15356. Epub 2022 Sep 20. PMID: 36098704. NOWAG B, SCHÄFER D, HENGL T, CORDUFF N, GOLDIE K. Biostimulating fillers and induction of inflammatory pathways: A preclinical investigation of macrophage response to calcium hydroxylapatite and poly-L lactic acid. *J Cosmet Dermatol*. 2023 Aug 18. doi: 10.1111/jocd.15928. Epub ahead of print. PMID: 37593832. ZARBAFIAN M, FABI SG, DAYAN S, GOLDIE K. The Emerging Field of Regenerative Aesthetics-Where We Are Now. *Dermatol Surg*. 2022 Jan 1;48(1):101-108. doi: 10.1097/DSS.0000000000003239. PMID: 34904577.

Submitter
Furginele Da Silva Beatriz
bia.furginele@gmail.com - Brazil

Presenter
Furginele Da Silva Beatriz
bia.furginele@gmail.com - Brazil

#8638

Facial Harmonization in Patients with Cleft Lip: Impact on Self-Esteem and Functionality

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Furginele Da Silva B¹

¹Beatriz Furginele da Silva, São paulo, Brazil

Background/Objectives: The objective of this study is to demonstrate the benefits of facial harmonization for patients with cleft lip, both aesthetically and functionally. We aim to evaluate the efficacy of these procedures in enhancing self-esteem and restoring essential functions, such as lip sealing, as well as in balancing facial asymmetries.

Methods: The study included patients with cleft lip who were treated through the social project "Preenchimento com Amor" in Brazil. Selection criteria were based on aesthetic, functional, and economic needs. Each patient underwent a detailed assessment to identify precise intervention points. Techniques employed included botulinum toxin, PDO threads, and hyaluronic acid. Treatment plans were individualized, considering the specifics of each cleft and the patient's facial structure. Interventions were performed in a controlled environment following stringent safety and hygiene protocols. Each procedure was documented with pre- and post-treatment photographs, and patients were followed up post-treatment to assess both immediate and long-term results.

Results: The results indicated a significant improvement in patients' self-esteem, measured by the Rosenberg Self-Esteem Scale after the procedures. Additionally, functional improvements, such as adequate lip sealing, positively impacted patients' eating and speaking abilities. Aesthetically, there was a notable reduction in facial asymmetries, resulting in a more harmonious and natural appearance. The combination of procedures proved effective in restoring lip volume and shape, minimizing asymmetries, and redefining facial contours.

Conclusions: Facial harmonization in patients with cleft lip is a viable and effective approach to improving both aesthetics and functionality. The procedures significantly contributed to enhancing patients' self-esteem and essential functions. This study underscores the importance of detailed and personalized planning to achieve satisfactory results.

References: 1. Description of cleft lip and its prevalence. 2. Facial harmonization techniques: botulinum toxin, PDO threads, and hyaluronic acid. 3. Studies on the improvement of self-esteem and quality of life through aesthetic interventions. 4. Safety and hygiene protocols in aesthetic procedures.

Submitter
Sofra Xanya
science@iellios.com - United Kingdom

Presenter
Sofra, Ph.d Md Xanya
science@iellios.com - United Kingdom

#8639

Vicious Circle of Hormonal Imbalance, Depression, Cravings & Adiposity

50 - Body contouring & skin tightening

Sofra, Ph.d Md X¹

¹City University London, London, United kingdom

Background/Objectives: A review of 320 articles concludes that no lipolysis method can work with people who are stress eating and are metabolically imbalanced exhibiting depressive and anxiety symptomatology. Overeating, obesity, and inflammation are the starting points of a process that evolves into hormonal and appetite dysregulations, complemented by excess lipids, and lipoproteins that prelude the emergence of diabetes, CVD and respiratory disease. Depression due to hypothyroidism reinforces food cravings and snacking as a coping mechanism. Metabolic dysfunction has been associated with mood disorders, manic depressive disorder, acute psychosis and anxiety by a number of studies. Subclinical hypothyroidism has been associated with depressive symptoms. 63% - 65% of anxiety disorders have been correlated with hypothyroidism.

Methods: A cross-sectional study with 254 patients demonstrated a seven-fold significantly higher risk of hypothyroid subjects developing a mood disorder. Ittermann et al examined the incidence of thyroid diseases in 2142 individuals with DSM IV diagnoses of depression and anxiety that were confirmed by a battery of tests including LEGEND and BDI-II. Hypothyroidism was positively correlated with the Beck depression inventory associating thyroid disorders with depression and anxiety. Boudarene et al reported that stress resulted in anxiety, and increased cortisol plasma levels that resulted in greater food consumption. High plasma levels of DHEA correlated with low anxiety. DHEA appears to have a positive effect on emotional balance and stability, possibly due to DHEA's dual function of antagonizing cortisol and its synthesizing sex hormones such as androstenedione and testosterone and oestrogens. Testosterone is another major player in moderating anxiety and depression. Giltay et al reported a higher incidence of anxiety, depression, social phobia and agoraphobia in women with lower salivary testosterone levels. Other studies have associated low testosterone with fatigue, irritability, dysphoria, compromised libido and depression in both men and women.

Results: Exercise is the cornerstone of hormonal balance which promotes a sense of psychological harmony. In our recent research with an effortless exercise regimen, testosterone increase was statistically significant at $p = 0.00732$ $p < 0.01$. For cortisol decrease $p = 0.00017$ $p < 0.001$ level. Testosterone increase was +42.23%. Cortisol showed a mean average decrease of -18.42% for both sexes. Prior to treatment, Free T3 was below the normal range in around 55% of the subjects. Post treatment, these subjects manifested the greatest increase of Free T3, which was optimized without spiking above normality. Visceral fat decrease had a $t = -9.302125$ and a value of $p < 0.00001$ which brought the statistical significance to $p < 0.00001$.

Conclusions: Leptin (appetite suppression hormone) and ghrelin (orexigenic or hunger hormone) were optimized after the treatments. Leptin increased within the normal range while ghrelin optimally decreased after the fifteen treatments, for all subjects. Mean average leptin increase was +10.82% and mean average ghrelin decrease was -7.35. Subjects reported reduced cravings for sugar and fatty foods yet, normal appetite. Body sculpting technologies should focus on metabolic boost, hormonal balance and hunger suppression.

References:Jose Viña, Consuelo Borrás, Juan Gambini, Juan Sastre, Federico V. Pallardó (2005) Why females live longer than males? Importance of the upregulation of longevity-associated genes by oestrogenic compounds, *FEBS Letters*, Volume 579, Issue 12, Pages 2541–2545, ISSN 0014-5793. <https://doi.org/10.1016/j.febslet.2005.03.090>. Tang, W. Y., & Ho, S. M. (2007). Epigenetic reprogramming and imprinting in origins of disease. *Reviews in Endocrine and Metabolic Disorders*, 8, 173–182. Chang, A. L. S., Bitter Jr, P. H., Qu, K., Lin, M., Rapicavoli, N. A., & Chang, H. Y. (2013). Rejuvenation of gene expression pattern of aged human skin by broadband light treatment: a pilot study. *Journal of Investigative Dermatology*, 133(2), 394–402. <https://doi.org/10.1038/jid.2012.287>. Xu, J., Spitale, R. C., Guan, L., Flynn, R. A., Torre, E. A., Li, R., ... & Chang, A. L. S. (2016). Novel gene expression profile of women with intrinsic skin youthfulness by whole transcriptome sequencing. *PLoS one*, 11(11), e0165913. <https://doi.org/10.1371/journal.pone.0165913>. Doctrow, S. R., Lopez, A., Schock, A. M., Duncan, N. E., Jourdan, M. M., Olasz, E. B., ... & Lazarova, Z. (2013). Anne Lynn S. Chang, Patrick H. Bitter Jr, Kun Qu, Meihong Lin, Nicole A. Rapicavoli and Howard Y. Chang. *Journal of Investigative Dermatology*, 133, 1691. Babatz, T. D., Spear, E. D., Xu, W., Sun, O. L., Nie, L., Carpenter, E. P., & Michaelis, S. (2021). Site specificity determinants for prelamrin A cleavage by the zinc metalloprotease ZMPSTE24. *Journal of Biological Chemistry*, 296, Babatz, T. D., Spear, E. D., Xu, W., Sun, O. L., Nie, L., Carpenter, E. P., & Michaelis, S. (2021). Site specificity determinants for prelamrin A cleavage by the zinc metalloprotease ZMPSTE24. *Journal of Biological Chemistry*, 296, <https://doi.org/10.1074/jbc.RA120.015792>. Messner, M., Ghadge, S. K., Maurer, T., Graber, M., Staggel, S., Christine Maier, S., ... & Zaruba, M. M. (2020). ZMPSTE24 is associated with elevated inflammation and Progerin mRNA. *Cells*, 9(9), 1981. doi: 10.3390/cells9091981 Alfaro-Arnedo, E., López, I. P., Piñeiro-Hermida, S., Canalejo, M., Gotera, C., Sola, J. J., ... & Pichel, J. G. (2022). IGF1R acts as a cancer-promoting factor in the tumor microenvironment facilitating lung metastasis implantation and progression. *Oncogene*, 41(28), 3625–3639. <https://doi.org/10.1038/s41388-022-02376-w>. Dahlström, M., Nordvall, G., Sundström, E., Åkesson, E., Tegerstedt, G., Eriksdotter, M., & Forsell, P. (2019). Identification of amino acid residues of nerve growth factor important for neurite outgrowth in human dorsal root ganglion neurons. *European Journal of Neuroscience*, 50(9), 3487–3501. <https://doi.org/10.1111/ejn.14513>. Prence, G., Minnoge, G., Strippoli, R., De Pasquale, L., Petrini, S., Cailleo, L., ... & Bracci-Laudiero, L. (2014). Nerve growth factor downregulates inflammatory response in human monocytes through TrkA. *The Journal of Immunology*, 192(7), 3345–3354. <https://doi.org/10.4049/jimmunol.1300825>. Nakamura, J., Aoyagi, S., Nanchi, I., Nakatsuka, S. I., Hirata, E., Shibata, S., ... & Oji, Y. (2009). Overexpression of eukaryotic elongation factor eEF2 in gastrointestinal cancers and its involvement in G2/M progression in the cell cycle. *International journal of oncology*, 34(5), 1181–1189. <https://doi.org/10.3892/ijo.00000246>. Deng, H., Wu, Y., & Jankovic, J. (2015). The EIF 4G1 gene and Parkinson's disease. *Acta Neurologica Scandinavica*, 132(2), 73–78. <https://doi.org/10.1111/ane.12397>. Panda, D. K., Bai, X., Zhang, Y., Stylianides, N. A., Korumilas, A. E., Lipman, M. L., & Karapalis, A. C. (2022). SCF-SKP2 E3 ubiquitin ligase links mTORC1/ER stress/ISR with YAP activation in murine renal cystogenesis. *The Journal of Clinical Investigation*, 132(24), Kordilis, J. L., Cheung, L. E., & Kazazian Jr, H. H. (2012). MOV10 RNA helicase is a potent inhibitor of retrotransposition in cells. <https://doi.org/10.1371/journal.pgen.1002941>. Schutyser, E., Richmond, A., & Van Damme, J. (2005). Involvement of CC chemokine ligand 18 (CCL18) in normal and pathological processes. *Journal of leukocyte biology*, 78(1), 14–26. [https://doi.org/10.15171/jlms.2019.S18](https://doi.org/10.1189/jlb.1204712.Khalikhal, E., Rezaei-Tavirani, M., Zali, M. R., & Akbari, Z. (2019). The evaluation of laser application in surgery: a review article. <i>Journal of lasers in medical sciences</i>, 10(Suppl 1), S104. <a href=). Parnigoni, A., Caon, I., Moretto, P., Viola, M., Karousou, E., Passi, A., & Vigiotti, D. (2021). The role of the multifaceted long non-coding RNAs: A nuclear-cytosolic interplay to regulate hyaluronan metabolism. *Matrix Biology Plus*, 11, 100060. <https://doi.org/10.1016/j.mbps.2021.100060>. Sun, P., Sun, L., Cui, J., Liu, L., & He, Q. (2020). Long noncoding RNA HAS2-AS1 accelerates non-small cell lung cancer chemotherapy resistance by targeting LSD1/EphB3 pathway. *American Journal of Translational Research*, 12(3), 950. Parnigoni, A., Caon, I., Moretto, P., Viola, M., Karousou, E., Passi, A., & Vigiotti, D. (2021). The role of the multifaceted long non-coding RNAs: A nuclear-cytosolic interplay to regulate hyaluronan metabolism. *Matrix Biology Plus*, 11, 100060. 21. Andersson, Gunnar (2016). "The Problem of the Empirical Basis in Critical Rationalism". In Shearmur, Jeremy; Stokes, Geoffrey (eds.). *The Cambridge Companion to Popper*. Cambridge Companions to Philosophy. Cambridge, UK: New York: Cambridge University Press. pp. 125–142. doi:10.1017/ccp9781139046503.005. ISBN 978-1-139-04650-3. OCLC 925355415. Goldspink, G., Scutt, A., Martindale, J., Jaenicke, T., Turay, L., & Gerlach, G. F. (1991). Stretch and force generation induce rapid hypertrophy and myosin isoform gene switching in adult skeletal muscle. *Biochemical Society Transactions*, 19(2), 368–373. DOI: 10.1042/bst0190368 Goldspink, G. (1999). Changes in muscle mass and phenotype and the expression of autocrine and systemic growth factors by muscle in response to stretch and overload. *Journal of anatomy*, 194(3), 323–334. <https://doi.org/10.1046/j.1469-7580.1999.19430323.x>. Semsarian, C., Wu, M. J., Ju, Y. K., Marciniec, T., Yeoh, T., Allen, D. G., ... & Graham, R. M. (1999). Skeletal muscle hypertrophy is mediated by a Ca2+-dependent calcineurin signalling pathway. *Nature*, 400(6744), 576–581 Hill, M., & Goldspink, G. (2003). Expression and splicing of the insulin-like growth factor gene in rodent muscle is associated with muscle satellite (stem) cell activation following local tissue damage. *The Journal of physiology*, 549(2), 409–418. <https://doi.org/10.1113/jphysiol.2002.035832>. Yang, S. Y., & Goldspink, G. (2002). Different roles of the IGF-I Ee peptide (MGF) and mature IGF-1 in myoblast proliferation and differentiation. *FEBS letters*, 522(1–3), 156–160. DOI: [https://doi.org/10.1016/S0014-5793\(02\)02918-6](https://doi.org/10.1016/S0014-5793(02)02918-6). Yang, S., Alnaqeb, M., Simpson, H., & Goldspink, G. (1996). Cloning and characterization of an IGF-1 isoform expressed in skeletal muscle subjected to stretch. *Journal of Muscle Research & Cell Motility*, 17, 487–495. <https://doi.org/10.1007/BF00123364>. McKoy, G., Ashley, W., Mander, J., Yang, S. Y., Williams, N., Russell, B., & Goldspink, G. (1999). Expression of insulin growth factor-1 splice variants and structural genes in rabbit skeletal muscle induced by stretch and stimulation. *The Journal of physiology*, 516(2), 583–592. DOI: <https://doi.org/10.1111/j.1469-7793.1999.0583x>. Sofra, X. (2020) Gain without Pain: Beyond Sport Effortless Exercise Solutions. *Journal of Aesthetic Nursing*, 9, 202–210. <https://doi.org/10.12968/joan.2020.9.5.202> [Citation Time(s):1] Sofra, X. & Lampe, N. (2020) Empowering the Woman: A Comprehensive Model of Sexual Anti-Ageing. *Journal of Aesthetic Nursing*, 9, 118–127. <https://doi.org/10.12968/joan.2020.9.3.118> [Citation Time(s):1] Sofra, X. How to get rid of visceral fat: a randomised double-blind clinical trial. *Journal of Aesthetic Nursing*, 2020, 9(7): 268–275. DOI: <https://doi.org/10.12968/joan.2020.9.7.268>. X. Gain without pain: beyond sport effortless exercise solutions. *Journal of Aesthetic Nursing*, 2020, 9(5): 202–210. DOI: <https://doi.org/10.12968/joan.2020.9.5.202>. Sofra X. The Importance of Systemic Balance in Safeguarding Health: A Randomized Double-Blind Clinical Trial on VLDL, Triglycerides, Free T3,Leptin, Ghrelin, Cortisol and Visceral Adipose Tissue. *Health*, 2020, 12(8). DOI: <https://doi.org/10.4236/health.2020.128078>. Sofra, X., Badami, S. Adverse Effects of Sedentary Lifestyles: Inflammation, and High-Glucose Induced Oxidative Stress-A Double Blind Randomized Clinical Trial on Diabetic and Prediabetic Patients. *Health*, 2020, 12(08): 1029. Article ID:102260, 20 pages DOI: <https://doi.org/10.4236/health.2020.128076>. Sofra, X., Lampe, N. Technological Advances in Accelerated Wound Repair and Regeneration. *Health*, 2020, 12(7): 717–737. DOI: <https://doi.org/10.4236/health.2020.127053>. Sofra, X., Lampe, N. A Randomized Longitudinal Double-Blind Clinical Trial on Long-Term Neuropathic Symptomatology Relief & Pain Analgesia. *Health*, 2020, 12(07): 738. ID:101363, 12 pages DOI: <https://doi.org/10.4236/health.2020.127054>. Sofra, X., Badami, S. A Review of COVID-19 associated factors: CRP, Creatinine, Bilirubin, VLDL,HDL, Triglycerides, Cortisol and Thyroid Function. *J Endo Metabol Res*, 2020, 1(2): 1–17. https://www.maplespub.com/webroot/files/A-Review-of-COVID19-associated-factors-CRP-Creatinine-Bilirubin-VLDL-HDL-Triglycerides-Cortisol-and-Thyroid-Function_1601046593.pdf. Sofra, X. Dynamics of Female Sexuality: Hidden Emotional Issues. *Health*, 2020, 12(6): 694–708. DOI: <https://doi.org/10.4236/health.2020.126051>. Sofra, X., Lampe, N. Empowering the woman: a comprehensive model of sexual anti-ageing. *Journal of Aesthetic Nursing*, 2020, 9(3): 118–127. DOI: <https://doi.org/10.12968/joan.2020.9.3.118>. Sofra, X. The Affinity between Obesity and COVID-19. *J Endo Metabol Res*, 2020, 1(2): 1–13. https://www.maplespub.com/webroot/files/The-Affinity-between-Obesity-and-COVID-19_1602748373.pdf. Sofra X, Badami S. A Review of COVID19 associated factors: CRP, Creatinine, Bilirubin, VLDL, HDL,Triglycerides, Cortisol, and Thyroid Function. *J Endo Metabol Res*, 2020, 1(2):1-17. <https://www.maplespub.com/article/A-Re-view-of-COVID19-associated-factors-CRP-Creatinine-Bilirubin-VLDL-HDL-Triglycerides-Cortisol-and-Thyroid-Function>. Sofra X (2022) Liver Repair of NAFLD patients, Following Effortless Exercise and the Possible Involvement of Endogenous Stem Cells. *Journal of Diabetes, Metabolic Disorders and Control* El Assar, M., Angulo, J., & Rodríguez-Mañas, L. (2013). Oxidative stress and vascular inflammation in ageing. *Free Radical Biology and Medicine*, 65, 380–401. <https://doi.org/10.1016/j.freeradbiomed.2013.07.003>. Zhao, Y., Simon, M., Seluanov, A. et al (2023), DNA damage and repair in age-related inflammation, *Nat Rev Immunol* 23, 75–89. <https://doi.org/10.1038/s41577-022-00751-y>. D De Magalhães, J. P., & Ocampo, A. (2022). Cellular reprogramming and the rise of rejuvenation biotech. *Trends in Biotechnology*, 40(6), 639–642. <https://doi.org/10.1016/j.tibtech.2022.01.011>. Sofra X (2021) Checkmate by a Protean Invisible Enemy. *Lampert Pub*. Sofra X (2023) Liver Repair of NAFLD patients following effortless exercise. *Journal of Diabetes, Metabolic Disorders and Control*. Volume 9, Issue 140, 41, 42, pp 36-47. Sofra, X (2023) The long term effects of effortless exercise on hormonal balance and health. *Journal of Diabetes, Metabolic Disorders and Control*. Volume 10, Issue 2, pp 86-91. Sofra, X., & Lampe, N. (2020). Technological Advances in Accelerated Wound Repair and Regeneration. *Health*, 12(7), 717–737. DOI: <https://doi.org/10.4236/health.2020.127053>. Sofra, X., & Lampe, N. (2020). A Randomized Longitudinal Double-Blind Clinical Trial on Long-Term Neuropathic Symptomatology Relief & Pain Analgesia. *Health*, 12(07), 738. <https://creativecommons.org/licenses/by/4.0/>. Kogure, A., Uno, M., Ikeda, T., & Nishida, E. (2017). The microRNA machinery regulates fasting-induced changes in gene expression and longevity in *Caenorhabditis elegans*. *Journal of Biochemistry*, 162(27), 11300–11309. doi: 10.1261/ma.1703809 Connolly, P. H., Cazzoio, V. J., Zaldívar, F., Nemet, D., Larson, J., Hung, S. P., ... & Cooper, D. M. (2004). Effects of exercise on gene expression in human peripheral blood mononuclear cells. *Journal of applied physiology*, 97(4), 1461–1469. <https://doi.org/10.1152/jappphysiol.00316.2004>. Yang, J., Diaz, N., Adelsberger, J., Zhou, X., Stevens, R., Rupert, A., ... & Cosentino, L. M. (2016). The effects of storage temperature on PBMC gene expression. *BMC immunology*, 17(1), 1–15. <https://doi.org/10.1186/s12865-016-0144-1>. Connolly, P. H., Cazzoio, V. J., Zaldívar, F., Nemet, D., Larson, J., Hung, S. P., ... & Cooper, D. M. (2004). Effects of exercise on gene expression in human peripheral blood mononuclear cells. *Journal of applied physiology*, 97(4), 1461–1469. <https://doi.org/10.1152/jappphysiol.00316.2004>. Zuk, P. A., Zhu, M. I., Mizuno, H., Huang, J., Futrell, J. W., Katz, A. J., ... & Hedrick, M. H. (2001). Multilineage cells from human adipose tissue: implications for cell-based therapies. *Tissue engineering*, 7(2), 211–228. <https://doi.org/10.1089/107632701300062859>. Dayan, C.M.; Panicker, V. Hypothyroidism and depression. *Eur. Thyroid J* 2013, 2, 168–179. <https://doi.org/10.1159/00035377>. Wiersinga, W.M. Therapy of endocrine disease: T4 + T3 combination therapy: Is there a true effect? *Eur. J. Endocrinol* 2017, 177, 287–296. <https://www.ncbi.nlm.nih.gov/pubmed/28855267>. Bathla, M.; Singh, M.; Relan, P. Prevalence of anxiety and depressive symptoms among patients with hypothyroidism. *Indian J. Endocrinol. Metab.* 2016, 20, 468–474. <http://www.ncbi.nlm.nih.gov/pubmed/27366712>. Vita, R.; Mazzi, V.; Antonelli, A.; Benvenia, S. Antithyroid medications and psychosis. *Expert Opin. Drug Saf.* 2013, 12, 865–872. <https://doi.org/10.1517/14740338.2013.823397>. Romero-Gómez, B., Guerrero-Alonso, P., Carmona-Torres, J. M., Notario-Pacheco, B., & Cobo-Cuenca, A. I. (2019). Mood disorders in levothyroxine-treated hypothyroid women. *International journal of environmental research and public health*, 16(23), 4776. W.U., E.L.; Chien, I.C.; Lin, C.H.; Chou, Y. J.; Chou, P. (2013) Increased risk of hypothyroidism and hyperthyroidism in patients with major depressive disorder: A population-based study. *J. Psychosom. Res.* 2013, 74, 233–237. <http://www.ncbi.nlm.nih.gov/pubmed/23438714>. Farmer, A.; Korszun, A.; Owen, M.J.; Craddock, N.; Jones, L.; Jones, J. Medical disorders in people with recurrent depression. *Br. J. Psychiatry* 2008, 192, 351–355. <https://doi.org/10.1192/bjp.bp.107.038380>. Radhakrishnan, R.; Calvin, S.; Singh, J.K.; Thomas, B.; Srinivasan, K. Thyroid dysfunction in major psychiatric disorders in a hospital based sample. *Indian J. Med. Res.* 2013, 138, 888–893. Bathla, M.; Singh, M.; Relan, P. Prevalence of anxiety and depressive symptoms among patients with hypothyroidism. *Indian J. Endocrinol. Metab.* 2016, 20, 468–474. <https://doi.org/10.4103/2230-8210.183476>. Siegman, E. M., Muller H. H. Q.; Luecke, C.; Philipsen, A.; Kornhuber, J.; Gromer, T. W. (2018) Association of depression and anxiety disorders with autoimmune thyroiditis: A systemic review and metaanalysis. *JAMA Psychiatry*, 75, 577–584. Larisch, R., Kley, K., Nikolaus, S., Sitte, W., Franz, M., Hatzel, H., ... & Müller, H. W. (2004). Depression and anxiety in different thyroid function states. Hormone and metabolic research, 36(09), 650–653. Itermann, T., Völzke, H., Baumeister, S.E. et al. Diagnosed thyroid disorders are associated with depression and anxiety. *Soc Psychiatry Psychiatr Epidemiol* 50, 1417–1425 (2015). <https://doi.org/10.1007/s00127-015-1043-3>. Wiersinga, W.M.(2017) Therapy of endocrine disease: T4 + T3 combination therapy: Is there a true effect? *Eur. J. Endocrinol* 177, 287–296. <http://www.ncbi.nlm.nih.gov/pubmed/28855267>. Panicker, V.; Evans, J.; Bjor, T.; Asvold, B.O.; Dayan, C.M.; Bjerkeset, O. (2009) A paradoxical difference in relationship between anxiety, depression and thyroidfunction in subjects on and not on T4: Findings from the HUNT study. *Clin. Endocrinol* 71, 574–580. <https://doi.org/10.1111/j.1365-2265.2008.03521.x>. Romero-Gómez, B., Guerrero-Alonso, P., Carmona-Torres, J. M., Notario-Pacheco, B., & Cobo-Cuenca, A. I. (2019). Mood disorders in levothyroxine-treated hypothyroid women. *International journal of environmental research and public health*, 16(23), 4776. Gynas Ayyhan, M.; Uguz, F.; Askin, R.; Gonen, M.S. The prevalence of depression and anxiety disorders in patients with euthyroid Hashimoto's thyroiditis: A comparative study. *Gen. Hosp. Psychiatry* 2014, 36, 95–98. <https://doi.org/10.1016/j.genhosppsy.2013.10.002>. Boudarene, M., Legros, J. J., & Timsit-Berthier, M. (2002). Study of the stress response: role of anxiety, cortisol and DHEAs. *L'encephale*, 28(2), 139–146. Tang, J., Chen, L., & Chen, H. (2021). The Utilization of dehydroepiandrosterone as a sexual hormone precursor in premenopausal and postmenopausal women: An overview. *Pharmacotrends*, 15(1), 46. doi: 10.3390/ph15010046 Villareal, D. T., Holloszy J. O. DHEA enhances effects of weight training on muscle mass and strength in elderly women and men. *Am. J. Physiol. Endocrinol. Metab.* 2006;291:E1003–E1008. doi: 10.1152/ajpendo.00100.2006. Khorram O. DHEA: A hormone with multiple effects. *Curr. Opin. Obstet. Gynecol.* 1996;8:351–354. doi: 10.1097/00001703-199610000-00006. McHenry, J., Carrier, N., Hull, E., & Kabbaj, M. (2014). Sex differences in anxiety and depression: role of testosterone. *Frontiers in neuroendocrinology*, 35(1), 42–57. <https://doi.org/10.1016/j.ynr.2013.09.001>. Giltay, E. J., Enter, D., Zitman, F. G., Penninx, B. W., van Pelt, J., Spinhoven, P., & Roelofs, K. (2012). Salivary testosterone: associations with depression, anxiety disorders, and antidepressant use in a large cohort study. *Journal of psychosomatic research*, 72(3), 205–213. <https://doi.org/10.1016/j.psychores.2011.11.014>. Barrett-Connor, E., von Mühlen, D. G., & Kritz-Silverstein, D. (1999). Bioavailable testosterone and depressed mood in older men: the Rancho Bernardo Study. *The Journal of Clinical Endocrinology & Metabolism*, 84(2), 573–577. Seidman, S. N. (2003). Androgens, Erectile Dysfunction, and Depression. *J Clin Psychiatry*, 64(10), 31–37. Bolour, S., & Braunstein, G. (2005). Testosterone therapy in women: a review. *International journal of impotence research*, 17(5), 399–408. Hintikka, J., Niskanen, L., Koivumaa-Honkanen, H., Tolmunen, T., Honkalampi, K., Lehto, S. M., & Viinamäki, H. (2009). Hypogonadism, decreased sexual desire, and long-term depression in middle-aged men. *The journal of sexual medicine*, 6(7), 2049–2057. Araujo, A. B., Durante, R., Feldman, H. A., Goldstein, I., & McKinlay, J. B. (1998). The relationship between depressive symptoms and male erectile dysfunction: cross-sectional results from the Massachusetts Male Ageing Study. *Psychosomatic medicine*, 60(4), 458–465. Skold, N., Dettendor, L., Stalder, T. and Kirschbaum, C. (2012) Elevated Hair Cortisol Concentrations in Endurance Athletes. *Psychoneuroendocrinology*, 37, 611–617. <https://doi.org/10.1016/j.psyneuen.2011.09.001>. Sofra, X., & Badami, S. (2020). A Review of COVID-19 associated factors: CRP, Creatinine, Bilirubin, VLDL, HDL, Triglycerides, Cortisol and Thyroid Function. *J Endo Metabol Res*, 1(2), 1–17. <https://www.maplespub.com/article/A-Review-of-COVID19-associated-factors-CRP-Creatinine-Bilirubin-VLDL-HDL-Triglycerides-Cortisol-and-Thyroid-Function>. Sofra, X., & Badami, S. (2020). Adverse effects of sedentary lifestyles: Inflammation, and high-glucose induced oxidative stress—A double-blind randomized clinical trial on diabetic and prediabetic patients. *Health*, 12(08), 1029. <https://creativecommons.org/licenses/by/4.0/>. Sofra, X. (2020). The Importance of Systemic Balance in Safeguarding Health: A Randomized Double-Blind Clinical Trial on VLDL, Triglycerides, Free T3, Leptin, Ghrelin, Cortisol and Visceral Adipose Tissue. *Health*, 12(08), 1067. <https://creativecommons.org/licenses/by/4.0/>. Sofra, X. (2020). How to get rid of visceral fat: a randomised double-blind clinical trial. *Journal of Aesthetic Nursing*, 9(7), 268–275. <https://doi.org/10.12968/joan.2020.9.7.268>. Lavie, C.J., Ozemek, C., Carbone, S., Katzmarzyk, P.T. and Blair, S.N. (2019) Sedentary Behavior, Exercise, and Cardiovascular Health. *Circulation Research*, 124, 799–815. <https://doi.org/10.1161/CIRCRESAHA.118.312669>. Kaminsky, L.A., Arena, R., Ellingsen, O., Harber, M.P., Myers, J., Ozemek, C. and Ross, R. (2019) Cardiorespiratory Fitness and Cardiovascular Disease—The Past, Present, and Future. *Progress in Cardiovascular Diseases*, 62, 86–93. <https://doi.org/10.1016/j.pcad.2019.01.002>. Imboden, M.T., Harber, M.P., Whaley, M.H., Finch, W.H., Bishop, D.L., Fleenor, B.S. and Kaminsky, L.A. (2019) The Association between the Change in Directly Measured Cardiorespiratory Fitness across Time and Mortality Risk. *Progress in Cardiovascular Diseases*, 62, 157–162. <https://www.ncbi.nlm.nih.gov/pubmed/30543812>. Ozemek, C., Laddu, D.R. and Lavie C.J. (2018) An Update on the Role of Cardiorespiratory Fitness, Structured Exercise and Lifestyle Physical Activity in Preventing Cardiovascular Disease and Health Risk. *Progress in Cardiovascular Diseases*, 61, 484–490. <https://doi.org/10.1016/j.pcad.2018.11.005>. Hill, E.E., Zack, E., Battaglini, C., Viru, M., Viru, A. and Hackney, A.C. (2008) Exercise and Circulating Cortisol Levels: The Intensity Threshold Effect. *Journal of Endocrinological Investigation*, 31, 587–591. <https://doi.org/10.1007/BF03345606>. Pedersen, B.K., Steensberg, A. and Schjerling, P. (2001) Muscle-Derived Interleukin-6: Possible Biological Effects. *The Journal of Physiology*, 536, 329–337. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2278876>. Grossmann, M. (2011) Low Testosterone in Men with Type 2 Diabetes: Significance and Treatment. *The Journal of Clinical Endocrinology & Metabolism*, 96, 2341–2353. <https://doi.org/10.1210/jc.2011-0118>. Shores, M.M., Moceri, V.M., Sloan, K.L., Matsumoto, A.M. and Kivlahan, D.R. (2005) Low Testosterone Levels Predict Incident Depressive Illness in Older Men: Effects of Age and Medical Morbidity. *The Journal of Clinical Psychiatry*, 66, 7–14. <https://doi.org/10.4088/JCP.v66n0102>. Lua, I., James, D., Wang, J., Wang, K. S., & Asahina, K. (2014). Mesodermal mesenchymal cells give rise to myofibroblasts, but not epithelial cells, in mouse liver injury. *Hepatology*, 60(1), 311–322. <https://doi.org/10.1002/hep.27035>. Tremolada, C., Colombo, V., & Ventura, C. (2016). Adipose tissue and mesenchymal stem cells: state of the art and Lipogems® technology development. *Current stem cell reports*, 2(3), 304–312. <https://doi.org/10.1007/s10078-016-0053-5>. Strem, B. M., Hickok, K. C., Zhu, M., Wulur, I., Alfonso, Z., Schreiber, R. E., ... & Hedrick, M. H. (2005). Multipotential differentiation of adipose tissue-derived stem cells. *The Keio journal of medicine*, 54(3), 132–141. <https://doi.org/10.2302/kjm.54.132>. Banas, A., Teraniti, T., Yamamoto, Y., Tokuhara, M., Takeshita, F., Quinn, G., ... & Ochiya, T. (2007). Adipose tissue-derived mesenchymal stem cells as a source of human hepatocytes. *Hepatology*, 46(1), 219–228. <https://doi.org/10.1002/hep.21704>. Van Poll, D., Parekadan, B., Borel Rinkes, I. H. M., Tilles, A. W., & Yarmush, M. L. (2008). Mesenchymal stem cell therapy for protection and repair of injured vital organs. *Cellular and Molecular Bioengineering*, 1(1), 42–50. <https://doi.org/10.1007/s12195-008-0001-2>. Erfoglu, M. (2013). Role of stem cells in repair of liver injury: experimental and clinical benefit of transferred stem cells on liver failure.

Submitter
Sofra Xanya
science@iellios.com - United Kingdom

Presenter
Sofra Ph.d Md Xanya
science@iellios.com - United Kingdom

#8640

Can Gene Expression Technologies Delay or Reverse Aging? A metanalysis of 340 studies concludes that interacting genes and proteins are vastly complex and intricate with many unknowns which currently prevent us from solving the anti-ageing equation in term

51 - Regenerative aesthetics

Sofra Ph.d Md X¹

¹City University, London, United kingdom

Background/Objectives: A metanalysis of 340 studies concludes that interacting genes and proteins are vastly complex and intricate with many unknowns which currently prevent us from solving the anti-ageing equation in terms of gene expression. Molecular studies involving genome modification should take into consideration the importance of apparently opposing genes and proteins which when seen as a whole, can orchestrate an optimal systemic balance. Gene expression is often a double-edged sword with positive effects turning negative when a particular gene is overexpressed.

Methods: Rejuvenation as a result of gene expression is still an open area of research with studies that have either been limited to in vitro research or clinical studies claiming success based on a limited perspective that selectively emphasises the benefits of certain genes while leaving the negative outcomes in the shadows of their silence. For example, some investigators relate the presence of ZMPSTE24, IGF1R, NGF4, EEF2, EIF4FBP1 CCL18, and other genes with “rejuvenation,” selectively focusing on potential benefits while ignoring the involvement of certain genes in malignancies and inflammation. Well-controlled gene expression molecular experimental studies with mechanotherapy and effortless exercise have limited themselves to the observation of increased slow skeletal genes associated with muscle growth. Exercise and nutrition are still the safest and most ethical methods of gene expression, at least until genome editing can be extended to delaying ageing, in the near or distant future. As observed in the research analysing gene expression as the result of different types of exercise, inflammatory events are counterbalanced by antagonizing anti-inflammatory ones.

Results: Health relies on optimal biological homeostasis and the harmonious interaction of opposite processes levelling and stabilizing each other. Exercise modalities and lifestyle still represent the cornerstone of delaying ageing and the most riskless method of increasing longevity by triggering processes that balance each other. As observed in the research analysing gene expression as the result of exercise, inflammatory events are counterbalanced by antagonizing anti-inflammatory ones

Conclusions: Health results from opposite processes levelling and stabilizing each other. Optimum is not the absence of inflammation but the absence of inflammatory processes progressing beyond the point of their necessity. Rejuvenation as a result of gene expression is still an open area of research with studies that have either been limited to in vitro research or clinical studies claiming success based on a limited perspective that selectively emphasises the benefits of certain genes while leaving the negative outcomes in the shadows of their silence.

References:Eileen M. Crimmins, Lifespan and Healthspan: Past, Present, and Promise, The Gerontologist, Volume 55, Issue 6, December 2015, Pages 901–911, <https://doi.org/10.1093/geront/gnv130> Robine J. M (2011). Age patterns in adult mortality. In R. Rogers E. M. Crimmins (Eds.), International handbook of adult mortality (pp. 207– 226). Netherlands, Springer. doi:10.1007/978-90-481-9996-9_10 Monickaraj, F., Aravind, S., Gokulakrishnan, K., Sathishkumar, C., Prabu, P., Prabu, D., ... & Balasubramanyam, M. (2012). Accelerated aging as evidenced by increased telomere shortening and mitochondrial DNA depletion in patients with type 2 diabetes. Molecular and cellular biochemistry, 365, 343-350. <https://doi.org/10.1007/s11010-012-1276-0> Shammias, M. A. (2011). Telomeres, lifestyle, cancer, and aging. Current opinion in clinical nutrition and metabolic care, 14(1), 28. 10.1097/MCO.0b013e32834121b1 Armanios, M. (2022). The role of telomeres in human disease. Annual review of genomics and human genetics, 23, 363-381. Alder, J. K., Cogan, J. D., Brown, A. F., Anderson, C. J., Lawson, W. E., Lansdorp, P. M., ... & Armanios, M. (2011). Ancestral mutation in telomerase causes defects in repeat addition processivity and manifests as familial pulmonary fibrosis. PLoS genetics, 7(3), e1001352. Alder, J. K., & Armanios, M. (2022). Telomere-mediated lung disease. Physiological reviews. Yokoyama K, Fukumoto K, Murakami T, Harada Si, Hosono R, Wadhwa R, et al. Extended Longevity of Caenorhabditis Elegans by Knocking in Extra Copies of hsp70F, a Homolog of Mot-2 (Mortalin)/Mthsp70/Grp75. FEBS Letters. 2002;516(1-3):53–57. PMID:11959102 Kimura K, Tanaka N, Nakamura N, Takano S, Ohkuma S. Knockdown of Mitochondrial Heat Shock Protein 70 Promotes Progeria-like Phenotypes in Caenorhabditis Elegans. Journal of Biological Chemistry. 2007;282(8):5910–5918. PMID:17189267 Ayyadevara S, Engle MR, Singh SP, Dandapat A, Licht CF, Beneš H, et al. Lifespan and Stress Resistance of Caenorhabditis Elegans Are Increased by Expression of Glutathione Transferases Capable of Metabolizing the Lipid Peroxidation Product 4-Hydroxynonenal. Aging cell. 2005;4(5):257–271. PMID:16164425 Ayyadevara S, Dandapat A, Singh SP, Siegel ER, Reis RJS, Zimniak L, et al. Life Span and Stress Resistance of Caenorhabditis Elegans Are Differentially Affected by Glutathione Transferases Metabolizing 4-Hydroxynon-2-Enal. Mechanisms of Ageing and Development. 2007;128(2):196–205. PMID:17157356 Wu L, Zhou B, Oshiro-Rapley N, Li M, Paulo JA, Webster CM, et al. An Ancient, Unified Mechanism for Metformin Growth Inhibition in C. Elegans and Cancer. Cell. 2016;167(7):1705–1718. PMID:27984722 Tihanyi B, Vellai T, Regős Á, Ari E, Müller F, Takács-Vellai K, The C. Elegans Hox Gene Ceh-13 Regulates Cell Migration and Fusion in a Non-Colinear Way. Implications for the Early Evolution of Hox Clusters. BMC Developmental Biology. 2010;10(1):78. PMID:20667114 Hyun M, Kim J, Dumur C, Schroeder FC, You YJ, BLIMP-1/BLMP-1 and Metastasis-Associated Protein Regulate Stress Resistant Development in Caenorhabditis Elegans. Genetics. 2016;203(4):1721–1732. PMID:27334271 Chen L, Zhang J, Xu J, Wan L, Teng K, Xiang J, et al. rBmtTX14 Increases the Life Span and Promotes the Locomotion of Caenorhabditis Elegans. PLOS One. 2016;11(9):e0161847. PMID:27611314 Sural S, Lu TC, Jung SA, Hsu AL, HSB-1 Inhibition and HSF-1 Overexpression Trigger Overlapping Transcriptional Changes to Promote Longevity in Caenorhabditis Elegans. G3: Genes, Genomes, Genetics. 2019;9(5):1679–1692. PMID:30894454 Chen X, McCue HV, Wong SQ, Kashyap SS, Kraemer BC, Barclay JW, et al. Ethosuximide Ameliorates Neurodegenerative Disease Phenotypes by Modulating DAF-16/FOXO Target Gene Expression. Molecular Neurodegeneration. 2015;10(1):S1. PMID:26419537 Narayan V, Ly T, Pourkarimi E, Murillo AB, Gartner A, Lamond AI, et al. Deep Proteome Analysis Identifies Age-Related Processes in C. Elegans. Cell Systems. 2016;3(2):144–159. PMID:27453442 Izadpanah A, Rappaport J, Datta PK. Epitranscriptomics of SARS-CoV-2 Infection. Front Cell Dev Biol. 2022 Apr 8;10:849298. doi: 10.3389/fcell.2022.849298. PMID: 35465335; PMCID: PMC9032796 Sofra X. (2021) Checkmate by a Protean Invisible Enemy. COVID-19 The Danger Within. LAP LAMBERT Academic Publishing (August 4, 2021). ISBN-10 : 6204182854 SBN-13 : 978-6204182858 McMahon, M., Forester, C., & Buffenstein, R. (2021). Aging through an epitranscriptomic lens. Nature Aging, 1(4), 335-346. <https://doi.org/10.1038/s43587-021-00058-y> Zhang, W., Qu, J., Liu, GH, et al. The ageing epigenome and its rejuvenation. Nat Rev Mol Cell Biol 21, 137–150 (2020). <https://doi.org/10.1038/s41392-019-0089-y> Belfort, M., & Boncora, R. P. (2014). Homing endonucleases: from genetic anomalies to programmable genomic clippers. Homing Endonucleases: Methods and Protocols, 1-26. Tsai, H. C., Pietrobon, V., Peng, M., Wang, S., Zhao, L., Marincola, F. M., & Cai, Q. (2022). Current strategies employed in the manipulation of gene expression for clinical purposes. Journal of Translational Medicine, 20(1), 535. <https://doi.org/10.1186/s12967-022-03747-3> Collier, B. S. (2019). Ethics of human genome editing. Annual Review of Medicine, 70, 289-305. <https://doi.org/10.1146/annurev-med-112717-094629> Luft, F. C. (1999). Bad genes, good people, association, linkage, longevity and the prevention of cardiovascular disease. Clinical and experimental pharmacology and physiology, 26(7), 576-579. <https://doi.org/10.1046/j.1440-1681.1999.03080.x> Jose Yina, Consuelo Borrás, Juan Gambini, Juan Sastre, Federico V. Pallardó (2005) Why females live longer than males? Importance of the upregulation of longevity-associated genes by oestrogenic compounds, FEBS Letters, Volume 579, Issue 12, Pages 2541-2545, ISSN 0014-5793, <https://doi.org/10.1016/j.febslet.2005.03.090>. Tang, W. Y., & Ho, S. M. (2007). Epigenetic reprogramming and imprinting in origins of disease. Reviews in Endocrine and Metabolic Disorders, 8, 173-182. Chang, A. L. S., Bitter Jr, P. H., Qu, K., Lin, M., Rapicavoli, N. A., & Chang, H. Y. (2013). Rejuvenation of gene expression pattern of aged human skin by broadband light treatment: a pilot study. Journal of Investigative Dermatology, 133(2), 394-402. <https://doi.org/10.1038/jid.2012.287> Xu, J., Spitale, R. C., Guan, L., Flynn, R. A., Torre, E. A., Li, R., ... & Chang, A. L. S. (2016). Novel gene expression profile of women with intrinsic skin youthfulness by whole transcriptome sequencing. PLoS one, 11(11), e0165913. <https://doi.org/10.1371/journal.pone.0165913> Doctrow, S. R., Lopez, A., Schock, A. M., Duncan, N. E., Jourdan, M. M., Olasz, E. B., ... & Lazarova, Z. (2013). Anne Lynn S. Chang, Patrick H. Bitter Jr, Kun Qu, Meihong Lin, Nicole A. Rapicavoli and Howard Y. Chang. Journal of Investigative Dermatology, 133, 1691. Babatz, T. D., Spear, E. D., Xu, W., Sun, O. L., Nie, L., Carpenter, E. P., & Michaelis, S. (2021). Site specificity determinants for prelamins A cleavage by the zinc metalloprotease ZMPSTE24. Journal of Biological Chemistry, 296, Babatz, T. D., Spear, E. D., Xu, W., Sun, O. L., Nie, L., Carpenter, E. P., & Michaelis, S. (2021). Site specificity determinants for prelamins A cleavage by the zinc metalloprotease ZMPSTE24. Journal of Biological Chemistry, 296, <https://doi.org/10.1074/jbc.RA120.015792> Messner, M., Ghadge, S. K., Maurer, T., Graber, M., Staggel, S., Christine Maier, S., ... & Zaruba, M. M. (2020). ZMPSTE24 is associated with elevated inflammation and Progerin mRNA. Cells, 9(9), 1981. doi: 10.3390/cells9091981 Alfaro-Arnedo, E., López, I. P., Piñeiro-Hermida, S., Canalejo, M., Gotera, C., Sola, J. J., ... & Pichel, J. G. (2022). IGF1R acts as a cancer-promoting factor in the tumor microenvironment facilitating lung metastasis implantation and progression. Oncogene, 41(28), 3625-3639. <https://doi.org/10.1038/s41388-022-02376-w> Dahlström, M., Nordvall, G., Sundström, E., Akesson, E., Tegerstedt, G., Eriksdotter, M., & Forsell, P. (2019). Identification of amino acid residues of nerve growth factor important for neurite outgrowth in human dorsal root ganglion neurons. European Journal of Neuroscience, 50(9), 3487-3501. <https://doi.org/10.1111/ejn.14513> Precnepe, G., Minnone, G., Strippoli, R., De Pasquale, L., Petrini, S., Caiello, L., ... & Bracci-Laudiero, L. (2014). Nerve growth factor downregulates inflammatory response in human monocytes through TrkA. The Journal of Immunology, 192(7), 3345-3354. <https://doi.org/10.4049/jimmunol.1300825> Nakamura, J., Aoyagi, S., Nanchi, I., Nakatsuka, S. I., Hirata, E., Shibata, S., ... & Oji, Y. (2009). Overexpression of eukaryotic elongation factor eEF2 in gastrointestinal cancers and its involvement in G2/M progression in the cell cycle. International journal of oncology, 34(5), 1181-1189. <https://doi.org/10.3892/ijo.00000246> Deng, H., Wu, Y., & Jankovic, J. (2015). The EIF 4G1 gene and Parkinson's disease. Acta Neurologica Scandinavica, 132(2), 73-78. <https://doi.org/10.1111/ane.12397> Goodier, J. L., Cheung, L. E., & Kazanian Jr, H. H. (2012). MOV10 RNA helicase is a potent inhibitor of retrotransposition in cells. <https://doi.org/10.1371/journal.pgen.1002941> Schutyser, E., Richmond, A., & Van Damme, J. (2005). Involvement of CC chemokine ligand 18 (CCL18) in normal and pathological processes. Journal of leukocyte biology, 78(1), 14-26. <https://doi.org/10.1189/jlb.10204712> Khalkhal, E., Rezaei-Tavirani, M., Zali, M. R., & Akbari, Z. (2019). The evaluation of laser application in surgery: a review article. Journal of lasers in medical sciences, 10(Suppl 1), S104. 10.15171/jlms.2019.S18 Parmigoni, A., Caon, I., Moretto, P., Viola, M., Karousou, E., Passi, A., & Vigiotti, D. (2021). The role of the multifaceted long non-coding RNAs: A nuclear-cytosolic interplay to regulate hyaluronan metabolism. Matrix Biology Plus, 11, 100060. <https://doi.org/10.1016/j.mplus.2021.100060> Sun, P., Sun, L., Cui, J., Liu, L., & He, Q. (2020). Long noncoding RNA HAS2-AS1 accelerates non-small cell lung cancer chemotherapy resistance by targeting LSD1/EphB3 pathway. American Journal of Translational Research, 12(3), 950. Parmigoni, A., Caon, I., Moretto, P., Viola, M., Karousou, E., Passi, A., & Vigiotti, D. (2021). The role of the multifaceted long non-coding RNAs: A nuclear-cytosolic interplay to regulate hyaluronan metabolism. Matrix Biology Plus, 11, 100060. Goldspink, G., Scutt, A., Martindale, J., Jaenicke, T., Turay, L., & Gerlach, G. F. (1991). Stretch and force generation induce rapid hypertrophy and myosin isoform gene switching in adult skeletal muscle. Biochemical Society Transactions, 19(2), 368-373. DOI: 10.1042/bst0190368 Goldspink, G. (1999). Changes in muscle mass and phenotype and the expression of autocrine and systemic growth factors by muscle in response to stretch and overload. Journal of anatomy, 194(3), 323-334. <https://doi.org/10.1046/j.1469-7580.1999.19430323.x> C. Semsarian, M.J. Wu, Y.K. Ju, T.Marciniec, T. Yeoh, D.G. Allen, R.P.Harvey, R.M. Graham Nature, 400 (1999), pp. 576-581 Hill, M., & Goldspink, G. (2003). Expression and splicing of the insulin-like growth factor gene in rodent muscle is associated with muscle satellite (stem) cell activation following local tissue damage. The Journal of physiology, 549(2), 409-418. <https://doi.org/10.1113/jphysiol.2002.053832> Yang, S. Y., & Goldspink, G. (2002). Different roles of the IGF-I Ee peptide (MGF) and mature IGF-I in myoblast proliferation and differentiation. FEBS letters, 522(1-3), 156-160. DOI [https://doi.org/10.1016/S0014-5793\(02\)02918-6](https://doi.org/10.1016/S0014-5793(02)02918-6) Yang, S., Alnaqeeb, M., Simpson, H., & Goldspink, G. (1996). Cloning and characterization of an IGF-I isoform expressed in skeletal muscle subjected to stretch. Journal of Muscle Research & Cell Motility, 17, 487-495. <https://doi.org/10.1007/BF00123364> McKoy, G., Ashley, W., Mander, J., Yang, S. Y., Williams, N., Russell, B., & Goldspink, G. (1999). Expression of insulin growth factor-1 splice variants and structural genes in rabbit skeletal muscle induced by stretch and stimulation. The Journal of physiology, 516(2), 583-592. DOI <https://doi.org/10.1111/j.1469-7793.1999.0583v.x> Sofra, X. (2020) Gain without Pain: Beyond Sport Effortless Exercise Solutions. Journal of Aesthetic Nursing, 9, 202-210. <https://doi.org/10.12968/joan.2020.9.5.202> [Citation Time(s):1] 47. Sofra, X. and Lampe, N. (2020) Empowering the Woman: A Comprehensive Model of Sexual Anti-Aging. Journal of Aesthetic Nursing, 9, 118-127. <https://doi.org/10.12968/joan.2020.9.3.118> [Citation Time(s):1] Sofra, X. How to get rid of visceral fat: a randomised double-blind clinical trial. Journal of Aesthetic Nursing, 2020, 9(7): 268-275. DOI: <https://doi.org/10.12968/joan.2020.9.7.268> [116] Sofra, X. Gain without pain: beyond sport effortless exercise solutions. Journal of Aesthetic Nursing,2020, 9(5): 202-210. DOI: <https://doi.org/10.12968/joan.2020.9.5.202> [117] Sofra X. The Importance of Systemic Balance in Safeguarding Health: A Randomized Double-Blind Clinical Trial on VLDL, Triglycerides, Free T3,Leptin, Ghrelin, Cortisol and Visceral Adipose Tissue. Health, 2020, 12(8).DOI: <https://doi.org/10.4236/health.2020.128078> [118] Sofra, X., Badami, S. Adverse Effects of Sedentary Lifestyles: Inflammation, and High-Glucose Induced Oxidative Stress-A Double Blind Randomized Clinical Trial on Diabetic and Prediabetic Patients. Health,2020, 12(08): 1029. Article ID:102260, 20 pages DOI: <https://doi.org/10.4236/health.2020.128076> [119] Sofra, X., Lampe, N. Technological Advances in Accelerated Wound Repair and Regeneration. Health,2020, 12(7): 717-737. DOI: 10.4236/health.2020.127053 [120] Sofra, X., Lampe, N. A Randomized Longitudinal Double-Blind Clinical Trial on Long-Term Neuropathic Symptomatology Relief & Pain Analgesia. Health, 2020, 12(07): 738. ID:101363, 12 pages DOI: 10.4236/health.2020.127054 [121] Sofra, X., Badami, S. A Review of COVID-19 associated factors: CRP, Creatinine, Bilirubin, VLDL,HDL, Triglycerides, Cortisol and Thyroid Function. J Endo Metabol Res, 2020, 1(2): 1-17. https://www.maplespub.com/webroot/files/A-Review-of-COVID19-associated-factors-CRP-Creatinine-Bilirubin-VLDL-HDL-Triglycerides-Cortisol-and-Thyroid-Function_1601046593.pdf [122] Sofra, X. Dynamics of Female Sexuality: Hidden Emotional Issues. Health, 2020, 12(6): 694-708. DOI: 10.4236/health.2020.126051 [123] Sofra, X., Lampe, N. Empowering the woman: a comprehensive model of sexual anti-ageing. Journal of Aesthetic Nursing, 2020, 9(3): 118-127. DOI: <https://doi.org/10.12968/joan.2020.9.3.118> [124] Sofra, X. The Affinity between Obesity and COVID-19. J Endo Metabol Res, 2020, 1(2): 1-13. https://www.maplespub.com/webroot/files/The-Affinity-between-Obesity-and-COVID-19_1602748373.pdf [125] Sofra X., Badami S. A Review of COVID19 associated factors: CRP, Creatinine, Bilirubin, VLDL, HDL,Triglycerides, Cortisol, and Thyroid Function.J Endo Metabol Res., 2020, 1(2):1-17. [https://www.maplespub.com/article/A-Re-view-of-COVID19-associated-factors-CRP-Creatinine-Bilirubin-VLDL-HDL-Triglycerides-Cortisol-and-Thyroid-Function_El_Assar_M.,_Angulo_J.,_Rodríguez-Mañas_L._\(2013\).](https://www.maplespub.com/article/A-Re-view-of-COVID19-associated-factors-CRP-Creatinine-Bilirubin-VLDL-HDL-Triglycerides-Cortisol-and-Thyroid-Function_El_Assar_M.,_Angulo_J.,_Rodríguez-Mañas_L._(2013).) Oxidative stress and vascular inflammation in aging. Free Radical Biology and Medicine, 65, 380-401. <https://doi.org/10.1016/j.freeradbiomed.2013.07.003> Zhao, Y., Simon, M., Seluanov, A. et al (2023), DNA damage and repair in age-related inflammation. Nat Rev Immunol 23, 75–89 <https://doi.org/10.1038/s41577-022-00751-y> D De Magalhães, J. P., & Ocampo, A. (2022). Cellular reprogramming and the rise of rejuvenation biotech. Trends in Biotechnology, 40(6), 639-642. OI: <https://doi.org/10.1016/j.tibtech.2022.01.011> Sofra X (2021) Checkmate by a Protean Invisible Enemy. Lampert Pub. Sofra X (2023) Liver Repair of NAFLD patients following effortless exercise. Journal of Diabetes, Metabolic Disorders and Control, Volume 9, Issue 140, 41, 42, pp 36-47. Sofra, X (2023) The long term effects of effortless exercise on hormonal balance and health. Journal of Diabetes, Metabolic Disorders and Control, Volume 10, Issue 2, pp 86-91. Sofra, X., & Lampe, N. (2020). Technological Advances in Accelerated Wound Repair and Regeneration. Health, 12(7), 717-737. DOI: 10.4236/health.2020.127053 Sofra, X., & Lampe, N. (2020). A Randomized Longitudinal Double-Blind Clinical Trial on Long-Term Neuropathic Symptomatology Relief & Pain Analgesia. Health, 12(07), 738. <http://creativecommons.org/licenses/by/4.0/> Kogure, A., Uno, M., Ikeda, T., & Nishida, E. (2017). The microRNA machinery regulates fasting-induced changes in gene expression and longevity in Caenorhabditis elegans. Journal of Biological Chemistry, 292(27), 11300-11309. doi: 10.1261/rna.1703809 Connolly, P. H., Caiozzo, V. J., Zaldivar, F., Nemet, D., Larson, J., Hung, S. P., ... & Cooper, D. M. (2004). Effects of exercise on gene expression in human peripheral blood mononuclear cells. Journal of applied physiology, 97(4), 1461-1469. <https://doi.org/10.1152/japplphysiol.00316.2004> Yang, J., Diaz, N., Adelsberger, J., Zhou, X., Stevens, R., Rupert, A., ... & Cosentino, L. M. (2016). The effects of storage temperature on PBMC gene expression. BMC immunology, 17(1), 1-15. <https://doi.org/10.1186/s12865-016-0144-1> Connolly, P. H., Caiozzo, V. J., Zaldivar, F., Nemet, D., Larson, J., Hung, S. P., ... & Cooper, D. M. (2004). Effects of exercise on gene expression in human peripheral blood mononuclear cells. Journal of applied physiology, 97(4), 1461-1469. <https://doi.org/10.1152/japplphysiol.00316.2004>

Submitter
Sofra Xanya
science@iellios.com - United Kingdom

Presenter
Sofra Ph.d Md Xanya
science@iellios.com - United Kingdom

#8641

Can Gene Expression Technologies Delay or Reverse Aging?

51 - Regenerative aesthetics

Sofra Ph.d Md X¹

¹City University, London, United kingdom

Background/Objectives: A metanalysis of 340 studies concludes that interacting genes and proteins are vastly complex and intricate with many unknowns which currently prevent us from solving the anti-ageing equation in terms of gene expression. Molecular studies involving genome modification should take into consideration the importance of apparently opposing genes and proteins which when seen as a whole, can orchestrate an optimal systemic balance. Gene expression is often a double-edged sword with positive effects turning negative when a particular gene is overexpressed.

Methods: Rejuvenation as a result of gene expression is still an open area of research with studies that have either been limited to in vitro research or clinical studies claiming success based on a limited perspective that selectively emphasises the benefits of certain genes while leaving the negative outcomes in the shadows of their silence. For example, some investigators relate the presence of ZMPSTE24, IGF1R, NGF4, EEF2, EIF4FBP1 CCL18, and other genes with “rejuvenation,” selectively focusing on potential benefits while ignoring the involvement of certain genes in malignancies and inflammation.

Results: Well-controlled gene expression molecular experimental studies with mechanotherapy and effortless exercise have limited themselves to the observation of increased slow skeletal genes associated with muscle growth. Exercise and nutrition are still the safest and most ethical methods of gene expression, at least until genome editing can be extended to delaying ageing, in the near or distant future. As observed in the research analysing gene expression as the result of different types of exercise, inflammatory events are counterbalanced by antagonizing anti-inflammatory ones.

Conclusions: Health relies on optimal biological homeostasis and the harmonious interaction of opposite processes levelling and stabilizing each other. Exercise modalities and lifestyle still represent the cornerstone of delaying ageing and the most riskless method of increasing longevity by triggering processes that balance each other. As observed in the research analysing gene expression as the result of exercise, inflammatory events are counterbalanced by antagonizing anti-inflammatory ones. Health results from opposite processes levelling and stabilizing each other. Optimum is not the absence of inflammation but the absence of inflammatory processes progressing beyond the point of their necessity. Rejuvenation as a result of gene expression is still an open area of research with studies that have either been limited to in vitro research or clinical studies claiming success based on a limited perspective that selectively emphasises the benefits of certain genes while leaving the negative outcomes in the shadows of their silence.

References:Eileen M. Crimmins, Lifespan and Healthspan: Past, Present, and Promise, The Gerontologist, Volume 55, Issue 6, December 2015, Pages 901–911, <https://doi.org/10.1093/geront/gnv130> Robine J. M (2011). Age patterns in adult mortality. In R. Rogers E. M. Crimmins (Eds.), International handbook of adult mortality (pp. 207– 226). Netherlands, Springer. doi:10.1007/978-90-481-9996-9_10 Monickaraj, F., Aravind, S., Gokulakrishnan, K., Sathishkumar, C., Prabu, P., Prabu, D., ... & Balasubramanyam, M. (2012). Accelerated aging as evidenced by increased telomere shortening and mitochondrial DNA depletion in patients with type 2 diabetes. Molecular and cellular biochemistry, 365, 343-350. <https://doi.org/10.1007/s11010-012-1276-0> Shammias, M. A. (2011). Telomeres, lifestyle, cancer, and aging. Current opinion in clinical nutrition and metabolic care, 14(1), 28. 10.1097/MCO.0b013e32834121b1 Armanios, M. (2022). The role of telomeres in human disease. Annual review of genomics and human genetics, 23, 363-381. Alder, J. K., Cogan, J. D., Brown, A. F., Anderson, C. J., Lawson, W. E., Lansdorp, P. M., ... & Armanios, M. (2011). Ancestral mutation in telomerase causes defects in repeat addition processivity and manifests as familial pulmonary fibrosis. PLoS genetics, 7(3), e1001352. Alder, J. K., & Armanios, M. (2022). Telomere-mediated lung disease. Physiological reviews. Yokoyama K, Fukumoto K, Murakami T, Harada Si, Hosono R, Wadhwa R, et al. Extended Longevity of Caenorhabditis Elegans by Knocking in Extra Copies of hsp70F, a Homolog of Mot-2 (Mortalin)/Mthsp70/Grp75. FEBS Letters. 2002;516(1-3):53–57. pmid:11959102 Kimura K, Tanaka N, Nakamura N, Takano S, Ohkuma S. Knockdown of Mitochondrial Heat Shock Protein 70 Promotes Progeria-like Phenotypes in Caenorhabditis Elegans. Journal of Biological Chemistry. 2007;282(8):5910–5918. pmid:17189267 Ayyadevara S, Engle MR, Singh SP, Dandapat A, Licht CF, Beneš H, et al. Lifespan and Stress Resistance of Caenorhabditis Elegans Are Increased by Expression of Glutathione Transferases Capable of Metabolizing the Lipid Peroxidation Product 4-Hydroxynonenal. Aging cell. 2005;4(5):257–271. pmid:16164425 Ayyadevara S, Dandapat A, Singh SP, Siegel ER, Reis RJS, Zimniak L, et al. Life Span and Stress Resistance of Caenorhabditis Elegans Are Differentially Affected by Glutathione Transferases Metabolizing 4-Hydroxynon-2-Enal. Mechanisms of Ageing and Development. 2007;128(2):196–205. pmid:17157356 Wu L, Zhou B, Oshiro-Rapley N, Li M, Paulo JA, Webster CM, et al. An Ancient, Unified Mechanism for Metformin Growth Inhibition in C. Elegans and Cancer. Cell. 2016;167(7):1705–1718. pmid:27984722 Tihanyi B, Vellai T, Regős Á, Ari E, Müller F, Takács-Vellai K, The C. Elegans Hox Gene Ceh-13 Regulates Cell Migration and Fusion in a Non-Colinear Way. Implications for the Early Evolution of Hox Clusters. BMC Developmental Biology. 2010;10(1):78. pmid:20667114 Hyun M, Kim J, Dumur C, Schroeder FC, You YJ, BLIMP-1/BLMP-1 and Metastasis-Associated Protein Regulate Stress Resistant Development in Caenorhabditis Elegans. Genetics. 2016;203(4):1721–1732. pmid:27334271 Chen L, Zhang J, Xu J, Wan L, Teng K, Xiang J, et al. rBmtTX14 Increases the Life Span and Promotes the Locomotion of Caenorhabditis Elegans. PLOS One. 2016;11(9):e0161847. pmid:27611314 Sural S, Lu TC, Jung SA, Hsu AL, HSB-1 Inhibition and HSF-1 Overexpression Trigger Overlapping Transcriptional Changes to Promote Longevity in Caenorhabditis Elegans. G3: Genes, Genomes, Genetics. 2019;9(5):1679–1692. pmid:30894454 Chen X, McCue HV, Wong SQ, Kashyap SS, Kraemer BC, Barclay JW, et al. Ethosuximide Ameliorates Neurodegenerative Disease Phenotypes by Modulating DAF-16/FOXO Target Gene Expression. Molecular Neurodegeneration. 2015;10(1):S1. pmid:26419537 Narayan V, Ly T, Pourkarimi E, Murillo AB, Gartner A, Lamond AI, et al. Deep Proteome Analysis Identifies Age-Related Processes in C. Elegans. Cell Systems. 2016;3(2):144–159. pmid:27453442 Izadpanah A, Rappaport J, Datta PK. Epitranscriptomics of SARS-CoV-2 Infection. Front Cell Dev Biol. 2022 Apr 8;10:849298. doi: 10.3389/fcell.2022.849298. PMID: 35465335; PMCID: PMC9032796 Sofra X. (2021) Checkmate by a Protean Invisible Enemy. COVID-19 The Danger Within. LAP LAMBERT Academic Publishing (August 4, 2021). ISBN-10 : 6204182854 SBN-13 : 978-6204182858 McMahon, M., Forester, C., & Buffenstein, R. (2021). Aging through an epitranscriptomic lens. Nature Aging, 1(4), 335–346. <https://doi.org/10.1038/s43587-021-00058-y> Zhang, W., Qu, J., Liu, GH, et al. The ageing epigenome and its rejuvenation. Nat Rev Mol Cell Biol 21, 137–150 (2020). <https://doi.org/10.1038/s41392-019-0089-y> Belfort, M., & Boncorra, R. P. (2014). Homing endonucleases: from genetic anomalies to programmable genomic clippers. Homing Endonucleases: Methods and Protocols, 1–26. Tsai, H. C., Pietrobon, V., Peng, M., Wang, S., Zhao, L., Marincola, F. M., & Cai, Q. (2022). Current strategies employed in the manipulation of gene expression for clinical purposes. Journal of Translational Medicine, 20(1), 535. <https://doi.org/10.1186/s12967-022-03747-3> Collier, B. S. (2019). Ethics of human genome editing. Annual Review of Medicine, 70, 289–305. <https://doi.org/10.1146/annurev-med-112717-094629> Luft, F. C. (1999). Bad genes, good people, association, linkage, longevity and the prevention of cardiovascular disease. Clinical and experimental pharmacology and physiology, 26(7), 576–579. <https://doi.org/10.1046/j.1440-1681.1999.03080.x> Jose Yina, Consuelo Borrás, Juan Gambini, Juan Sastre, Federico V. Pallardó (2005) Why females live longer than males? Importance of the upregulation of longevity-associated genes by oestrogenic compounds, FEBS Letters, Volume 579, Issue 12, Pages 2541–2545, ISSN 0014-5793, <https://doi.org/10.1016/j.febslet.2005.03.090>. Tang, W. Y., & Ho, S. M. (2007). Epigenetic reprogramming and imprinting in origins of disease. Reviews in Endocrine and Metabolic Disorders, 8, 173–182. Chang, A. L. S., Bitter Jr, P. H., Qu, K., Lin, M., Rapicavoli, N. A., & Chang, H. Y. (2013). Rejuvenation of gene expression pattern of aged human skin by broadband light treatment: a pilot study. Journal of Investigative Dermatology, 133(2), 394–402. <https://doi.org/10.1038/jid.2012.287> Xu, J., Spitale, R. C., Guan, L., Flynn, R. A., Torre, E. A., Li, R., ... & Chang, A. L. S. (2016). Novel gene expression profile of women with intrinsic skin youthfulness by whole transcriptome sequencing. PLoS one, 11(11), e0165913. <https://doi.org/10.1371/journal.pone.0165913> Doctrow, S. R., Lopez, A., Schock, A. M., Duncan, N. E., Jourdan, M. M., Olasz, E. B., ... & Lazarova, Z. (2013). Anne Lynn S. Chang, Patrick H. Bitter Jr, Kun Qu, Meihong Lin, Nicole A. Rapicavoli and Howard Y. Chang. Journal of Investigative Dermatology, 133, 1691. Babatz, T. D., Spear, E. D., Xu, W., Sun, O. L., Nie, L., Carpenter, E. P., & Michaelis, S. (2021). Site specificity determinants for prelamins A cleavage by the zinc metalloprotease ZMPSTE24. Journal of Biological Chemistry, 296, Babatz, T. D., Spear, E. D., Xu, W., Sun, O. L., Nie, L., Carpenter, E. P., & Michaelis, S. (2021). Site specificity determinants for prelamins A cleavage by the zinc metalloprotease ZMPSTE24. Journal of Biological Chemistry, 296, <https://doi.org/10.1074/jbc.RA120.015792> Messner, M., Ghadge, S. K., Maurer, T., Graber, M., Staggel, S., Christine Maier, S., ... & Zaruba, M. M. (2020). ZMPSTE24 is associated with elevated inflammation and Progerin mRNA. Cells, 9(9), 1981. doi: 10.3390/cells9091981 Alfaro-Arnedo, E., López, I. P., Piñeiro-Hermida, S., Canalejo, M., Gotera, C., Sola, J. J., ... & Pichel, J. G. (2022). IGF1R acts as a cancer-promoting factor in the tumor microenvironment facilitating lung metastasis implantation and progression. Oncogene, 41(28), 3625–3639. <https://doi.org/10.1038/s41388-022-02376-w> Dahlström, M., Nordvall, G., Sundström, E., Akesson, E., Tegerstedt, G., Eriksdotter, M., & Forsell, P. (2019). Identification of amino acid residues of nerve growth factor important for neurite outgrowth in human dorsal root ganglion neurons. European Journal of Neuroscience, 50(9), 3487–3501. <https://doi.org/10.1111/ejn.14513> Precince, G., Minnone, G., Strippoli, R., De Pasquale, L., Petrini, S., Caiello, L., ... & Bracci-Laudiero, L. (2014). Nerve growth factor downregulates inflammatory response in human monocytes through TrkA. The Journal of Immunology, 192(7), 3345–3354. <https://doi.org/10.10049/jimmunol.1300825> Nakamura, J., Aoyagi, S., Nanchi, I., Nakatsuka, S. I., Hirata, E., Shibata, S., ... & Oji, Y. (2009). Overexpression of eukaryotic elongation factor eEF2 in gastrointestinal cancers and its involvement in G2/M progression in the cell cycle. International journal of oncology, 34(5), 1181–1189. <https://doi.org/10.3892/ijo.00000246> Deng, H., Wu, Y., & Jankovic, J. (2015). The EIF 4G1 gene and Parkinson's disease. Acta Neurologica Scandinavica, 132(2), 73–78. <https://doi.org/10.1111/ane.12397> Goodier, J. L., Cheung, L. E., & Kazanian Jr, H. H. (2012). MOV10 RNA helicase is a potent inhibitor of retrotransposition in cells. <https://doi.org/10.1371/journal.pgen.1002941> Schutyser, E., Richmond, A., & Van Damme, J. (2005). Involvement of CC chemokine ligand 18 (CCL18) in normal and pathological processes. Journal of leukocyte biology, 78(1), 14–26. <https://doi.org/10.1189/jlb.10204712> Khalkhal, E., Rezaei-Tavirani, M., Zali, M. R., & Akbari, Z. (2019). The evaluation of laser application in surgery: a review article. Journal of lasers in medical sciences, 10(Suppl 1), S104. 10.15171/jlms.2019.S18 Parmigoni, A., Caon, I., Moretto, P., Viola, M., Karousou, E., Passi, A., & Vigiotti, D. (2021). The role of the multifaceted long non-coding RNAs: A nuclear-cytosolic interplay to regulate hyaluronan metabolism. Matrix Biology Plus, 11, 100060. <https://doi.org/10.1016/j.mplus.2021.100060> Sun, P., Sun, L., Cui, J., Liu, L., & He, Q. (2020). Long noncoding RNA HAS2-AS1 accelerates non-small cell lung cancer chemotherapy resistance by targeting LSD1/EphB3 pathway. American Journal of Translational Research, 12(3), 950. Parmigoni, A., Caon, I., Moretto, P., Viola, M., Karousou, E., Passi, A., & Vigiotti, D. (2021). The role of the multifaceted long non-coding RNAs: A nuclear-cytosolic interplay to regulate hyaluronan metabolism. Matrix Biology Plus, 11, 100060. Goldspink, G., Scutt, A., Martindale, J., Jaenicke, T., Turay, L., & Gerlach, G. F. (1991). Stretch and force generation induce rapid hypertrophy and myosin isoform gene switching in adult skeletal muscle. Biochemical Society Transactions, 19(2), 368–373. DOI: 10.1042/bst0190368 Goldspink, G. (1999). Changes in muscle mass and phenotype and the expression of autocrine and systemic growth factors by muscle in response to stretch and overload. Journal of anatomy, 194(3), 323–334. <https://doi.org/10.1046/j.1469-7580.1999.19430323.x> C. Semsarian, M.J. Wu, Y.K. Ju, T.Marciniec, T. Yeoh, D.G. Allen, R.P.Harvey, R.M. Graham Nature, 400 (1999), pp. 576–581 Hill, M., & Goldspink, G. (2003). Expression and splicing of the insulin-like growth factor gene in rodent muscle is associated with muscle satellite (stem) cell activation following local tissue damage. The Journal of physiology, 549(2), 409–418. <https://doi.org/10.1113/jphysiol.2002.053832> Yang, S. Y., & Goldspink, G. (2002). Different roles of the IGF-I Ee peptide (MGF) and mature IGF-I in myoblast proliferation and differentiation. FEBS letters, 522(1–3), 156–160. DOI [https://doi.org/10.1016/S0014-5793\(02\)02918-6](https://doi.org/10.1016/S0014-5793(02)02918-6) Yang, S., Alnaqeeb, M., Simpson, H., & Goldspink, G. (1996). Cloning and characterization of an IGF-I isoform expressed in skeletal muscle subjected to stretch. Journal of Muscle Research & Cell Motility, 17, 487–495. <https://doi.org/10.1007/BF00123364> McKoy, G., Ashley, W., Mander, J., Yang, S. Y., Williams, N., Russell, B., & Goldspink, G. (1999). Expression of insulin growth factor-1 splice variants and structural genes in rabbit skeletal muscle induced by stretch and stimulation. The Journal of physiology, 516(2), 583–592. DOI <https://doi.org/10.1111/j.1469-7793.1999.0583v.x> Sofra, X. (2020) Gain without Pain: Beyond Sport Effortless Exercise Solutions. Journal of Aesthetic Nursing, 9, 202–210. <https://doi.org/10.12968/joan.2020.9.5.202> [Citation Time(s):1] 47. Sofra, X. and Lampe, N. (2020) Empowering the Woman: A Comprehensive Model of Sexual Anti-Aging. Journal of Aesthetic Nursing, 9, 118–127. <https://doi.org/10.12968/joan.2020.9.3.118> [Citation Time(s):1] Sofra, X. How to get rid of visceral fat: a randomised double-blind clinical trial. Journal of Aesthetic Nursing, 2020, 9(7): 268–275. DOI: <https://doi.org/10.12968/joan.2020.9.7.268> [116] Sofra, X. Gain without pain: beyond sport effortless exercise solutions. Journal of Aesthetic Nursing,2020, 9(5): 202–210. DOI: <https://doi.org/10.12968/joan.2020.9.5.202> [117] Sofra X. The Importance of Systemic Balance in Safeguarding Health: A Randomized Double-Blind Clinical Trial on VLDL, Triglycerides, Free T3,Leptin, Ghrelin, Cortisol and Visceral Adipose Tissue. Health, 2020, 12(8).DOI: <https://doi.org/10.4236/health.2020.128078> [118] Sofra, X., Badami, S. Adverse Effects of Sedentary Lifestyles: Inflammation, and High-Glucose Induced Oxidative Stress-A Double Blind Randomized Clinical Trial on Diabetic and Prediabetic Patients. Health,2020, 12(08): 1029. Article ID:102260, 20 pages DOI: <https://doi.org/10.4236/health.2020.128076> [119] Sofra, X., Lampe, N. Technological Advances in Accelerated Wound Repair and Regeneration. Health,2020, 12(7): 717-737. DOI: 10.4236/health.2020.127053 [120] Sofra, X., Lampe, N. A Randomized Longitudinal Double-Blind Clinical Trial on Long-Term Neuropathic Symptomatology Relief & Pain Analgesia. Health, 2020, 12(07): 738. ID:101363, 12 pages DOI: 10.4236/health.2020.127054 [121] Sofra, X., Badami, S. A Review of COVID-19 associated factors: CRP, Creatinine, Bilirubin, VLDL,HDL, Triglycerides, Cortisol and Thyroid Function. J Endo Metabol Res, 2020, 1(2): 1-17. https://www.maplespub.com/webroot/files/A-Review-of-COVID19-associated-factors-CRP-Creatinine-Bilirubin-VLDL-HDL-Triglycerides-Cortisol-and-Thyroid-Function_1601046593.pdf [122] Sofra, X. Dynamics of Female Sexuality: Hidden Emotional Issues. Health, 2020, 12(6): 694–708. DOI: 10.4236/health.2020.126051 [123] Sofra, X., Lampe, N. Empowering the woman: a comprehensive model of sexual anti-ageing. Journal of Aesthetic Nursing, 2020, 9(3): 118–127. DOI: <https://doi.org/10.12968/joan.2020.9.3.118> [124] Sofra, X. The Affinity between Obesity and COVID-19. J Endo Metabol Res, 2020, 1(2): 1-13. https://www.maplespub.com/webroot/files/The-Affinity-between-Obesity-and-COVID-19_1602748373.pdf [125] Sofra X., Badami S. A Review of COVID19 associated factors: CRP, Creatinine, Bilirubin, VLDL, HDL,Triglycerides, Cortisol, and Thyroid Function.J Endo Metabol Res., 2020, 1(2):1-17. [https://www.maplespub.com/article/A-Re-view-of-COVID19-associated-factors-CRP-Creatinine-Bilirubin-VLDL-HDL-Triglycerides-Cortisol-and-Thyroid-Function_El_Assar_M.,_Angulo_J.,_Rodríguez-Mañas_L._\(2013\).](https://www.maplespub.com/article/A-Re-view-of-COVID19-associated-factors-CRP-Creatinine-Bilirubin-VLDL-HDL-Triglycerides-Cortisol-and-Thyroid-Function_El_Assar_M.,_Angulo_J.,_Rodríguez-Mañas_L._(2013).) Oxidative stress and vascular inflammation in aging. Free Radical Biology and Medicine, 65, 380–401. <https://doi.org/10.1016/j.freeradbiomed.2013.07.003> Zhao, Y., Simon, M., Seluanov, A. et al (2023), DNA damage and repair in age-related inflammation. Nat Rev Immunol 23, 75–89 <https://doi.org/10.1038/s41577-022-00751-y> D De Magalhães, J. P., & Ocampo, A. (2022). Cellular reprogramming and the rise of rejuvenation biotech. Trends in Biotechnology, 40(6), 639–642. OI: <https://doi.org/10.1016/j.tibtech.2022.01.011> Sofra X (2021) Checkmate by a Protean Invisible Enemy. Lampert Pub. Sofra X (2023) Liver Repair of NAFLD patients following effortless exercise. Journal of Diabetes, Metabolic Disorders and Control, Volume 9, Issue 140, 41, 42, pp 36-47. Sofra, X (2023) The long term effects of effortless exercise on hormonal balance and health. Journal of Diabetes, Metabolic Disorders and Control, Volume 10, Issue 2, pp 86-91. Sofra, X., & Lampe, N. (2020). Technological Advances in Accelerated Wound Repair and Regeneration. Health, 12(7), 717–737. DOI: 10.4236/health.2020.127053 Sofra, X., & Lampe, N. (2020). A Randomized Longitudinal Double-Blind Clinical Trial on Long-Term Neuropathic Symptomatology Relief & Pain Analgesia. Health, 12(07), 738. <http://creativecommons.org/licenses/by/4.0/> Kogure, A., Uno, M., Ikeda, T., & Nishida, E. (2017). The microRNA machinery regulates fasting-induced changes in gene expression and longevity in Caenorhabditis elegans. Journal of Biological Chemistry, 292(27), 11300–11309. doi: 10.1261/rna.1703809 Connolly, P. H., Caiozzo, V. J., Zaldivar, F., Nemet, D., Larson, J., Hung, S. P., ... & Cooper, D. M. (2004). Effects of exercise on gene expression in human peripheral blood mononuclear cells. Journal of applied physiology, 97(4), 1461–1469. <https://doi.org/10.1152/japplphysiol.00316.2004> Yang, J., Diaz, N., Adelsberger, J., Zhou, X., Stevens, R., Rupert, A., ... & Cosentino, L. M. (2016). The effects of storage temperature on PBMC gene expression. BMC immunology, 17(1), 1–15. <https://doi.org/10.1186/s12865-016-0144-1> Connolly, P. H., Caiozzo, V. J., Zaldivar, F., Nemet, D., Larson, J., Hung, S. P., ... & Cooper, D. M. (2004). Effects of exercise on gene expression in human peripheral blood mononuclear cells. Journal of applied physiology, 97(4), 1461–1469. <https://doi.org/10.1152/japplphysiol.00316.2004>

Submitter
Sofra Xanya
science@iellios.com - United Kingdom

Presenter
Sora Ph.d Md Xanya
science@iellios.com - United Kingdom

#8642

The Collagen Miracle and why it's not Enough for Youthful Rejuvenation

62 - Anti-aging & integrative medicine

Sora Ph.d Md X¹

¹City University, London, United kingdom

Background/Objectives: This presentation is based on a meta-analysis of around 320 articles. All traumatic procedures increase collagen. Collagen is the scar developing over a healing wound. Excessive production of collagen results in keloids. Since open injuries are hideous, large laser and RF corporations invented the “invisible wound” that is formed under the surface of the skin. They succeeded in contriving a method of forcing the body to increase its collagen in a certain area, but without investigating whether the collagen increase at the treatment site was accompanied by deficient amounts of collagen in neighbouring areas.

Methods: They never tested the null hypothesis as they should, according to validity and reliability principles. They never examined if there is a systemic collagen deficiency in areas other than those receiving the laser or RF treatment. Their counterargument would probably be: “Let’s laser and RF more areas!” Forgetting that collagen increase depends on the body’s supplies and capacity to produce the collagen. If the body was unable to supply this protein lasers and RF would increase nothing! The glorification of “collagen” has rendered it synonymous with youth maintenance. There are 7 types of collagen involved in skin integrity and 18,127 proteins determine the age of the human epidermis only. Around 8,987 proteins control the outer epidermis, the stratum corneum, and 9,140 proteins are the brains of the inner epidermis, comprising cell layers down to the basal membrane. Overall, collagen is 1/18,127 proteins on the human epidermis only and 1/100,000 proteins in the entire body.

Results: Importantly, one cannot have true rejuvenation without proteostasis: the balance of proteins within their optimal range and their harmonious interactions. Proteostasis is what determines aging and disease. Hormones are proteins and the deleterious effects of hormonal imbalance have been widely explored and are well known.

Conclusions: Proteostasis is the dynamic regulation of a balanced/functional proteome. Aging is the loss of protein homeostasis. The body cannot produce collagen because of the inefficient protein to protein communications and the systematic unfolding of proteins that renders proteins non-functional interfering with the instructions necessary for the body repair mechanisms to produce new collagens. The proteostasis network includes competing and integrated biological pathways within cells that control: * biogenesis, * protein folding, * protein trafficking, * protein degradation. For true skin regeneration, a number of cellular processes are necessary. These include metabolic, multicellular organismal processes, extracellular structure organization, protein development and transport, catabolic events and adequate cellular communication and stimulus-response

References:Jose Viña, Consuelo Borrás, Juan Gambini, Juan Sastre, Federico V. Pallardó (2005) Why females live longer than males? Importance of the upregulation of longevity-associated genes by oestrogenic compounds, *FEBS Letters*, Volume 579, Issue 12, Pages 2541–2545, ISSN 0014-5793. <https://doi.org/10.1016/j.febslet.2005.03.090>. Tang, W. Y., & Ho, S. M. (2007). Epigenetic reprogramming and imprinting in origins of disease. *Reviews in Endocrine and Metabolic Disorders*, 8, 173–182. Chang, A. L. S., Bitter Jr, P. H., Qu, K., Lin, M., Rapicavoli, N. A., & Chang, H. Y. (2013). Rejuvenation of gene expression pattern of aged human skin by broadband light treatment: a pilot study. *Journal of Investigative Dermatology*, 133(2), 394–402. <https://doi.org/10.1038/jid.2012.287>. Xu, J., Spitale, R. C., Guan, L., Flynn, R. A., Torre, E. A., Li, R., ... & Chang, A. L. S. (2016). Novel gene expression profile of women with intrinsic skin youthfulness by whole transcriptome sequencing. *PLoS one*, 11(11), e0165913. <https://doi.org/10.1371/journal.pone.0165913>. Doctrow, S. R., Lopez, A., Schock, A. M., Duncan, N. E., Jourdan, M. M., Olasz, E. B., ... & Lazarova, Z. (2013). Anne Lynn S. Chang, Patrick H. Bitter Jr, Kun Qu, Meihong Lin, Nicole A. Rapicavoli and Howard Y. Chang. *Journal of Investigative Dermatology*, 133, 1691. Babatz, T. D., Spear, E. D., Xu, W., Sun, O. L., Nie, L., Carpenter, E. P., & Michaelis, S. (2021). Site specificity determinants for prelamrin A cleavage by the zinc metalloprotease ZMPSTE24. *Journal of Biological Chemistry*, 296, Babatz, T. D., Spear, E. D., Xu, W., Sun, O. L., Nie, L., Carpenter, E. P., & Michaelis, S. (2021). Site specificity determinants for prelamrin A cleavage by the zinc metalloprotease ZMPSTE24. *Journal of Biological Chemistry*, 296, <https://doi.org/10.1074/jbc.RA120.015792>. Messner, M., Ghadge, S. K., Maurer, T., Graber, M., Staggel, S., Christine Maier, S., ... & Zaruba, M. M. (2020). ZMPSTE24 is associated with elevated inflammation and Progerin mRNA. *Cells*, 9(9), 1981. doi: 10.3390/cells9091981 Alfaro-Arnedo, E., López, I. P., Piñeiro-Hermida, S., Canalejo, M., Gotera, C., Sola, J. J., ... & Pichel, J. G. (2022). IGF1R acts as a cancer-promoting factor in the tumor microenvironment facilitating lung metastasis implantation and progression. *Oncogene*, 41(28), 3625–3639. <https://doi.org/10.1038/s41388-022-02376-w>. Dahlström, M., Nordvall, G., Sundström, E., Åkesson, E., Tegerstedt, G., Eriksdotter, M., & Forsell, P. (2019). Identification of amino acid residues of nerve growth factor important for neurite outgrowth in human dorsal root ganglion neurons. *European Journal of Neuroscience*, 50(9), 3487–3501. <https://doi.org/10.1111/ejn.14513>. Precence, G., Minnoge, G., Strippoli, R., De Pasquale, L., Petrini, S., Caciello, L., ... & Bracci-Laudiero, L. (2014). Nerve growth factor downregulates inflammatory response in human monocytes through TrkA. *The Journal of Immunology*, 192(7), 3345–3354. <https://doi.org/10.4049/jimmunol.1300825>. Nakamura, J., Aoyagi, S., Nanchi, I., Nakatsuka, S. I., Hirata, E., Shibata, S., ... & Oji, Y. (2009). Overexpression of eukaryotic elongation factor eEF2 in gastrointestinal cancers and its involvement in G2/M progression in the cell cycle. *International journal of oncology*, 34(5), 1181–1189. <https://doi.org/10.3892/ijo.00000246>. Deng, H., Wu, Y., & Jankovic, J. (2015). The EIF 4G1 gene and Parkinson's disease. *Acta Neurologica Scandinavica*, 132(2), 73–78. <https://doi.org/10.1111/ane.12397>. Panda, D. K., Bai, X., Zhang, Y., Stylianides, N. A., Korumilas, A. E., Lipman, M. L., & Karapalis, A. C. (2022). SCF-SKP2 E3 ubiquitin ligase links mTORC1/ER stress/ISR with YAP activation in murine renal cystogenesis. *The Journal of Clinical Investigation*, 132(24), Kordilis, J. L., Cheung, L. E., & Kazanian Jr, H. H. (2012). MOV10 RNA helicase is a potent inhibitor of retrotransposition in cells. <https://doi.org/10.1371/journal.pgen.1002941>. Schutyser, E., Richmond, A., & Van Damme, J. (2005). Involvement of CC chemokine ligand 18 (CCL18) in normal and pathological processes. *Journal of leukocyte biology*, 78(1), 14–26. [https://doi.org/10.1517/jlms.2019.S18](https://doi.org/10.1189/jlb.1204712.Khalikhal, E., Rezaei-Tavirani, M., Zali, M. R., & Akbari, Z. (2019). The evaluation of laser application in surgery: a review article. <i>Journal of lasers in medical sciences</i>, 10(Suppl 1), S104. <a href=). Parnigoni, A., Caon, I., Moretto, P., Viola, M., Karousou, E., Passi, A., & Vigiotti, D. (2021). The role of the multifaceted long non-coding RNAs: A nuclear-cytosolic interplay to regulate hyaluronan metabolism. *Matrix Biology Plus*, 11, 100060. <https://doi.org/10.1016/j.mbps.2021.100060>. Sun, P., Sun, L., Cui, J., Liu, L., & He, Q. (2020). Long noncoding RNA HAS2-AS1 accelerates non-small cell lung cancer chemotherapy resistance by targeting LSD1/EphB3 pathway. *American Journal of Translational Research*, 12(3), 950. Parnigoni, A., Caon, I., Moretto, P., Viola, M., Karousou, E., Passi, A., & Vigiotti, D. (2021). The role of the multifaceted long non-coding RNAs: A nuclear-cytosolic interplay to regulate hyaluronan metabolism. *Matrix Biology Plus*, 11, 100060. 21. Andersson, Gunnar (2016). "The Problem of the Empirical Basis in Critical Rationalism". In Shearmur, Jeremy; Stokes, Geoffrey (eds.). *The Cambridge Companion to Popper*. Cambridge Companions to Philosophy. Cambridge, UK: New York: Cambridge University Press. pp. 125–142. doi:10.1017/ccp9781139046503.005. ISBN 978-1-139-04650-3. OCLC 925355415. Goldspink, G., Scutt, A., Martindale, J., Jaenicke, T., Turay, L., & Gerlach, G. F. (1991). Stretch and force generation induce rapid hypertrophy and myosin isoform gene switching in adult skeletal muscle. *Biochemical Society Transactions*, 19(2), 368–373. DOI: 10.1042/bst0190368 Goldspink, G. (1999). Changes in muscle mass and phenotype and the expression of autocrine and systemic growth factors by muscle in response to stretch and overload. *Journal of anatomy*, 194(3), 323–334. <https://doi.org/10.1046/j.1469-7580.1999.19430323.x>. Semsarian, C., Wu, M. J., Ju, Y. K., Marciniec, T., Yeoh, T., Allen, D. G., ... & Graham, R. M. (1999). Skeletal muscle hypertrophy is mediated by a Ca2+-dependent calcineurin signalling pathway. *Nature*, 400(6744), 576–581 Hill, M., & Goldspink, G. (2003). Expression and splicing of the insulin-like growth factor gene in rodent muscle is associated with muscle satellite (stem) cell activation following local tissue damage. *The Journal of physiology*, 549(2), 409–418. <https://doi.org/10.1113/jphysiol.2002.035832>. Yang, S. Y., & Goldspink, G. (2002). Different roles of the IGF-I Ee peptide (MGF) and mature IGF-1 in myoblast proliferation and differentiation. *FEBS letters*, 522(1–3), 156–160. DOI: [https://doi.org/10.1016/S0014-5793\(02\)02918-6](https://doi.org/10.1016/S0014-5793(02)02918-6). Yang, S., Alnaqeb, M., Simpson, H., & Goldspink, G. (1996). Cloning and characterization of an IGF-1 isoform expressed in skeletal muscle subjected to stretch. *Journal of Muscle Research & Cell Motility*, 17, 487–495. <https://doi.org/10.1007/BF00123364>. McKoy, G., Ashley, W., Mander, J., Yang, S. Y., Williams, N., Russell, B., & Goldspink, G. (1999). Expression of insulin growth factor-1 splice variants and structural genes in rabbit skeletal muscle induced by stretch and stimulation. *The Journal of physiology*, 516(2), 583–592. DOI: <https://doi.org/10.1111/j.1469-7793.1999.0583x>. Sofra, X. (2020) Gain without Pain: Beyond Sport Effortless Exercise Solutions. *Journal of Aesthetic Nursing*, 9, 202–210. <https://doi.org/10.12968/joan.2020.9.5.202> [Citation Time(s):1] Sofra, X. & Lampe, N. (2020) Empowering the Woman: A Comprehensive Model of Sexual Anti-Ageing. *Journal of Aesthetic Nursing*, 9, 118–127. <https://doi.org/10.12968/joan.2020.9.3.118> [Citation Time(s):1] Sofra, X. How to get rid of visceral fat: a randomised double-blind clinical trial. *Journal of Aesthetic Nursing*, 2020, 9(7): 268–275. DOI: <https://doi.org/10.12968/joan.2020.9.7.268>. X. Gain without pain: beyond sport effortless exercise solutions. *Journal of Aesthetic Nursing*, 2020, 9(5): 202–210. DOI: <https://doi.org/10.12968/joan.2020.9.5.202>. Sofra X. The Importance of Systemic Balance in Safeguarding Health: A Randomized Double-Blind Clinical Trial on VLDL, Triglycerides, Free T3,Leptin, Ghrelin, Cortisol and Visceral Adipose Tissue. *Health*, 2020, 12(8). DOI: <https://doi.org/10.4236/health.2020.128078>. Sofra, X., Badami, S. Adverse Effects of Sedentary Lifestyles: Inflammation, and High-Glucose Induced Oxidative Stress-A Double Blind Randomized Clinical Trial on Diabetic and Prediabetic Patients. *Health*, 2020, 12(08): 1029. Article ID:102260, 20 pages DOI: <https://doi.org/10.4236/health.2020.128076>. Sofra, X., Lampe, N. Technological Advances in Accelerated Wound Repair and Regeneration. *Health*, 2020, 12(7): 717–737. DOI: 10.4236/health.2020.127053 Sofra, X., Lampe, N. A Randomized Longitudinal Double-Blind Clinical Trial on Long-Term Neuropathic Symptomatology Relief & Pain Analgesia. *Health*, 2020, 12(07): 738. ID:101363, 12 pages DOI: 10.4236/health.2020.127054 Sofra, X., Badami, S. A Review of COVID-19 associated factors: CRP, Creatinine, Bilirubin, VLDL,HDL, Triglycerides, Cortisol and Thyroid Function. *J Endo Metabol Res*, 2020, 1(2): 1–17. https://www.maplespub.com/webroot/files/A-Review-of-COVID19-associated-factors-CRP-Creatinine-Bilirubin-VLDL-HDL-Triglycerides-Cortisol-and-Thyroid-Function_1601046593.pdf Sofra, X. Dynamics of Female Sexuality: Hidden Emotional Issues. *Health*, 2020, 12(6): 694–708. DOI: 10.4236/health.2020.126051 Sofra, X., Lampe, N. Empowering the woman: a comprehensive model of sexual anti-ageing. *Journal of Aesthetic Nursing*, 2020, 9(3): 118–127. DOI: <https://doi.org/10.12968/joan.2020.9.3.118> Sofra, X. The Affinity between Obesity and COVID-19. *J Endo Metabol Res*, 2020, 1(2): 1–13. https://www.maplespub.com/webroot/files/The-Affinity-between-Obesity-and-COVID-19_1602748373.pdf Sofra X, Badami S. A Review of COVID19 associated factors: CRP, Creatinine, Bilirubin, VLDL, HDL,Triglycerides, Cortisol, and Thyroid Function. *J Endo Metabol Res*, 2020, 1(2):1–17. <https://www.maplespub.com/article/A-Re-view-of-COVID19-associated-factors-CRP-Creatinine-Bilirubin-VLDL-HDL-Triglycerides-Cortisol-and-Thyroid-Function> Sofra X (2022) Liver Repair of NAFLD patients, Following Effortless Exercise and the Possible Involvement of Endogenous Stem Cells. *Journal of Diabetes, Metabolic Disorders and Control* El Assar, M., Angulo, J., & Rodríguez-Mañas, L. (2013). Oxidative stress and vascular inflammation in ageing. *Free Radical Biology and Medicine*, 65, 380–401. <https://doi.org/10.1016/j.freeradbiomed.2013.07.003>. Zhao, Y., Simon, M., Seluanov, A. et al (2023), DNA damage and repair in age-related inflammation. *Nat Rev Immunol* 23, 75–89. <https://doi.org/10.1038/s41577-022-00751-y>. D De Magalhães, J. P., & Ocampo, A. (2022). Cellular reprogramming and the rise of rejuvenation biotech. *Trends in Biotechnology*, 40(6), 639–642. <https://doi.org/10.1016/j.tibtech.2022.01.011> Sofra X (2021) Checkmate by a Protean Invisible Enemy. *Lampert Pub*. Sofra X (2023) Liver Repair of NAFLD patients following effortless exercise. *Journal of Diabetes, Metabolic Disorders and Control*. Volume 9, Issue 140, 41, 42, pp 36–47. Sofra, X (2023) The long term effects of effortless exercise on hormonal balance and health. *Journal of Diabetes, Metabolic Disorders and Control*. Volume 10, Issue 2, pp 86–91. Sofra, X., & Lampe, N. (2020). Technological Advances in Accelerated Wound Repair and Regeneration. *Health*, 12(7), 717–737. DOI: 10.4236/health.2020.127053 Sofra, X., & Lampe, N. (2020). A Randomized Longitudinal Double-Blind Clinical Trial on Long-Term Neuropathic Symptomatology Relief & Pain Analgesia. *Health*, 12(07), 738. <https://creativecommons.org/licenses/by/4.0/> Kogure, A., Uno, M., Ikeda, T., & Nishida, E. (2017). The microRNA machinery regulates fasting-induced changes in gene expression and longevity in *Caenorhabditis elegans*. *Journal of Biochemistry*, 162(27), 11300–11309. doi: 10.1261/ma.1703809 Connolly, P. H., Cazzoio, V. J., Zaldivar, F., Nemet, D., Larson, J., Hung, S. P., ... & Cooper, D. M. (2004). Effects of exercise on gene expression in human peripheral blood mononuclear cells. *Journal of applied physiology*, 97(4), 1461–1469. <https://doi.org/10.1152/jappphysiol.00316.2004>. Yang, J., Diaz, N., Adelsberger, J., Zhou, X., Stevens, R., Rupert, A., ... & Cosentino, L. M. (2016). The effects of storage temperature on PBMC gene expression. *BMC immunology*, 17(1), 1–15. <https://doi.org/10.1186/s12865-016-0144-1> Connolly, P. H., Cazzoio, V. J., Zaldivar, F., Nemet, D., Larson, J., Hung, S. P., ... & Cooper, D. M. (2004). Effects of exercise on gene expression in human peripheral blood mononuclear cells. *Journal of applied physiology*, 97(4), 1461–1469. <https://doi.org/10.1152/jappphysiol.00316.2004>. Zuk, P. A., Zhu, M. I., Mizuno, H., Huang, J., Futrell, J. W., Katz, A. J., ... & Hedrick, M. H. (2001). Multilineage cells from human adipose tissue: implications for cell-based therapies. *Tissue engineering*, 7(2), 211–228. <https://doi.org/10.1089/107632701300062859>. Dayan, C.M.; Panicker, V. Hypothyroidism and depression. *Eur. Thyroid J* 2013, 2, 168–179. <https://doi.org/10.1159/00035377> Wiersinga, W.M. Therapy of endocrine disease: T4 + T3 combination therapy: Is there a true effect? *Eur. J. Endocrinol* 2017, 177, 287–296. <http://www.ncbi.nlm.nih.gov/pubmed/28855267> Bathla, M.; Singh, M.; Relan, P. Prevalence of anxiety and depressive symptoms among patients with hypothyroidism. *Indian J. Endocrinol. Metab.* 2016, 20, 468–474. <http://www.ncbi.nlm.nih.gov/pubmed/27366712> Vita, R.; Mazzi, V.; Antonelli, A.; Benvenia, S. Antithyroid medications and psychosis. *Expert Opin. Drug Saf.* 2013, 12, 865–872. <https://doi.org/10.1517/14740338.2013.823397> Romero-Gómez, B., Guerrero-Alonso, P., Carmona-Torres, J. M., Notario-Pacheco, B., & Cobo-Cuenca, A. I. (2019). Mood disorders in levothyroxine-treated hypothyroid women. *International journal of environmental research and public health*, 16(23), 4776 Wu, E.L.; Chien, I.C.; Lin, C.H.; Chou, Y. J.; Chou, P. (2013) Increased risk of hypothyroidism and hyperthyroidism in patients with major depressive disorder: A population-based study. *J. Psychosom. Res.* 2013, 74, 233–237. <http://www.ncbi.nlm.nih.gov/pubmed/23438714> Farmer, A.; Korszun, A.; Owen, M.J.; Craddock, N.; Jones, L.; Jones, J. Medical disorders in people with recurrent depression. *Br. J. Psychiatry* 2008, 192, 351–355. <https://doi.org/10.1192/bjp.bp.107.038380> Radhakrishnan, R.; Calvin, S.; Singh, J.K.; Thomas, B.; Srinivasan, K. Thyroid dysfunction in major psychiatric disorders in a hospital based sample. *Indian J. Med. Res.* 2013, 138, 888–893 Bathla, M.; Singh, M.; Relan, P. Prevalence of anxiety and depressive symptoms among patients with hypothyroidism. *Indian J. Endocrinol. Metab.* 2016, 20, 468–474. <https://doi.org/10.4103/2230-8210.183476> Siegman, E. M. Muller H. H. Q. Lucke, C. Philipsen, A. Kornhuber, J.; Gromer, T. W. (2018) Association of depression and anxiety disorders with autoimmune thyroiditis: A systemic review and metaanalysis *JAMA Psychiatry*, 75, 577–584 Larisch, R., Kley, K., Nikolaus, S., Sitte, W., Franz, M., Hatzel, H., ... & Müller, H. W. (2004). Depression and anxiety in different thyroid function states. Hormone and metabolic research, 36(09), 650–653 Itermann, T., Völzke, H., Baumeister, S.E. et al. Diagnosed thyroid disorders are associated with depression and anxiety. *Soc Psychiatry Psychiatr Epidemiol* 50, 1417–1425 (2015). <https://doi.org/10.1007/s00127-015-1043-3> Wiersinga, W.M.(2017) Therapy of endocrine disease: T4 + T3 combination therapy: Is there a true effect? *Eur. J. Endocrinol* 177, 287–296. <http://www.ncbi.nlm.nih.gov/pubmed/28855267> Panicker, V.; Evans, J.; Bjor, T.; Asvold, B.O.; Dayan, C.M.; Bjerkeset, O. (2009) A paradoxical difference in relationship between anxiety, depression and thyroidfunction in subjects on and not on T4: Findings from the HUNT study. *Clin. Endocrinol* 71, 574–580 <https://doi.org/10.1111/j.1365-2265.2008.03521.x> Romero-Gómez, B., Guerrero-Alonso, P., Carmona-Torres, J. M., Notario-Pacheco, B., & Cobo-Cuenca, A. I. (2019). Mood disorders in levothyroxine-treated hypothyroid women. *International journal of environmental research and public health*, 16(23), 4776. Gynas Ayhan, M.; Uguz, F.; Askin, R.; Gonen, M.S. The prevalence of depression and anxiety disorders in patients with euthyroid Hashimoto's thyroiditis: A comparative study. *Gen. Hosp. Psychiatry* 2014, 36, 95–98. <https://doi.org/10.1016/j.genhosppsy.2013.10.002> Boudarene, M., Legros, J. J., & Timsit-Berthier, M. (2002). Study of the stress response: role of anxiety, cortisol and DHEAs. *L'encephale*, 28(2), 139–146. Tang, J., Chen, L., & Chen, H. (2021). The Utilization of dehydroepiandrosterone as a sexual hormone precursor in premenopausal and postmenopausal women: An overview. *Pharmacotrends*, 15(1), 46. doi: 10.3390/ph15010046 Villareal, D. T., Holloszy J. O. DHEA enhances effects of weight training on muscle mass and strength in elderly women and men. *Am. J. Physiol. Endocrinol. Metab.* 2006;291:E1003–E1008. doi: 10.1152/ajpendo.00100.2006. Khorram O. DHEA: A hormone with multiple effects. *Curr. Opin. Obstet. Gynecol.* 1996;8:351–354. doi: 10.1097/00001703-199610000-00006. McHenry, J., Carrier, N., Hull, E., & Kabaj, M. (2014). Sex differences in anxiety and depression: role of testosterone. *Frontiers in neuroendocrinology*, 35(1), 42–57. <https://doi.org/10.1016/j.yfrne.2013.09.001> Giltay, E. J., Enter, D., Zitman, F. G., Penninx, B. W., van Pelt, J., Spinhoven, P., & Roelofs, K. (2012). Salivary testosterone: associations with depression, anxiety disorders, and antidepressant use in a large cohort study. *Journal of psychosomatic research*, 72(3), 205–213. <https://doi.org/10.1016/j.psychores.2011.11.014> Barrett-Connor, E., von Mühlen, D. G., & Kritz-Silverstein, D. (1999). Bioavailable testosterone and depressed mood in older men: the Rancho Bernardo Study. *The Journal of Clinical Endocrinology & Metabolism*, 84(2), 573–577. Seidman, S. N. (2003). Androgens, Erectile Dysfunction, and Depression. *J Clin Psychiatry*, 64(10), 31–37. Bolour, S., & Braunstein, G. (2005). Testosterone therapy in women: a review. *International journal of impotence research*, 17(5), 399–408. Hintikka, J., Niskanen, L., Koivumaa-Honkanen, H., Tolmunen, T., Honkalampi, K., Lehto, S. M., & Viinamäki, H. (2009). Hypogonadism, decreased sexual desire, and long-term depression in middle-aged men. *The journal of sexual medicine*, 6(7), 2049–2057. Araujo, A. B., Durante, R., Feldman, H. A., Goldstein, I., & McKinlay, J. B. (1998). The relationship between depressive symptoms and male erectile dysfunction: cross-sectional results from the Massachusetts Male Ageing Study. *Psychosomatic medicine*, 60(4), 458–465. Skold, N., Dettendor, L., Stalder, T. and Kirschbaum, C. (2012) Elevated Hair Cortisol Concentrations in Endurance Athletes. *Psychoneuroendocrinology*, 37, 611–617. <https://doi.org/10.1016/j.psyneuen.2011.09.001> Sofra, X., & Badami, S. (2020). A Review of COVID-19 associated factors: CRP, Creatinine, Bilirubin, VLDL, HDL, Triglycerides, Cortisol and Thyroid Function. *J Endo Metabol Res*, 1(2), 1–17. <https://www.maplespub.com/article/A-Review-of-COVID19-associated-factors-CRP-Creatinine-Bilirubin-VLDL-HDL-Triglycerides-Cortisol-and-Thyroid-Function> Sofra, X., & Badami, S. (2020). Adverse effects of sedentary lifestyles: Inflammation, and high-glucose induced oxidative stress—A double-blind randomized clinical trial on diabetic and prediabetic patients. *Health*, 12(08), 1029. <https://creativecommons.org/licenses/by/4.0/> Sofra, X. (2020). The Importance of Systemic Balance in Safeguarding Health: A Randomized Double-Blind Clinical Trial on VLDL, Triglycerides, Free T3, Leptin, Ghrelin, Cortisol and Visceral Adipose Tissue. *Health*, 12(08), 1067. <https://creativecommons.org/licenses/by/4.0/> Sofra, X. (2020). How to get rid of visceral fat: a randomised double-blind clinical trial. *Journal of Aesthetic Nursing*, 9(7), 268–275. <https://doi.org/10.12968/joan.2020.9.7.268> Lavie, C.J., Ozemek, C., Carbone, S., Katzmarzyk, P.T. and Blair, S.N. (2019) Sedentary Behavior, Exercise, and Cardiovascular Health. *Circulation Research*, 124, 799–815. <https://doi.org/10.1161/CIRCRESAHA.118.312669> Kaminsky, L.A., Arena, R., Ellingsen, O., Harber, M.P., Myers, J., Ozemek, C. and Ross, R. (2019) Cardiorespiratory Fitness and Cardiovascular Disease—The Past, Present, and Future. *Progress in Cardiovascular Diseases*, 62, 86–93. <https://doi.org/10.1016/j.pcad.2019.01.002> Imboden, M.T., Harber, M.P., Whaley, M.H., Finch, W.H., Bishop, D.L., Fleenor, B.S. and Kaminsky, L.A. (2019) The Association between the Change in Directly Measured Cardiorespiratory Fitness across Time and Mortality Risk. *Progress in Cardiovascular Diseases*, 62, 157–162. <https://www.ncbi.nlm.nih.gov/pubmed/30543812> Ozemek, C., Laddu, D.R. and Lavie C.J. (2018) An Update on the Role of Cardiorespiratory Fitness, Structured Exercise and Lifestyle Physical Activity in Preventing Cardiovascular Disease and Health Risk. *Progress in Cardiovascular Diseases*, 61, 484–490. <https://doi.org/10.1016/j.pcad.2018.11.005> Hill, E.E., Zack, E., Battaglini, C., Viru, M., Viru, A. and Hackney, A.C. (2008) Exercise and Circulating Cortisol Levels: The Intensity Threshold Effect. *Journal of Endocrinological Investigation*, 31, 587–591. <https://doi.org/10.1007/BF03345606> Pedersen, B.K., Steensberg, A. and Schjerling, P. (2001) Muscle-Derived Interleukin-6: Possible Biological Effects. *The Journal of Physiology*, 536, 329–337. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2278876> Grossmann, M. (2011) Low Testosterone in Men with Type 2 Diabetes: Significance and Treatment. *The Journal of Clinical Endocrinology & Metabolism*, 96, 2341–2353. <https://doi.org/10.1210/jc.2011-0118> Shores, M.M., Moceri, V.M., Sloan, K.L., Matsumoto, A.M. and Kivlahan, D.R. (2005) Low Testosterone Levels Predict Incident Depressive Illness in Older Men: Effects of Age and Medical Morbidity. *The Journal of Clinical Psychiatry*, 66, 7–14. <https://doi.org/10.4088/JCP.v66n0102> Lua, I., James, D., Wang, J., Wang, K. S., & Asahina, K. (2014). Mesodermal mesenchymal cells give rise to myofibroblasts, but not epithelial cells, in mouse liver injury. *Hepatology*, 60(1), 311–322. <https://doi.org/10.1002/hep.27035> Tremolada, C., Colombo, V., & Ventura, C. (2016). Adipose tissue and mesenchymal stem cells: state of the art and Lipogems® technology development. *Current stem cell reports*, 2(3), 304–312. <https://doi.org/10.1007/s10078-016-0053-5> Strem, B. M., Hickok, K. C., Zhu, M., Wulur, I., Alfonso, Z., Schreiber, R. E., ... & Hedrick, M. H. (2005). Multipotential differentiation of adipose tissue-derived stem cells. *The Keio journal of medicine*, 54(3), 132–141. <https://doi.org/10.2302/kjm.54.132> Banas, A., Teratani, T., Yamamoto, Y., Tokuhara, M., Takeshita, F., Quinn, G., ... & Ochiya, T. (2007). Adipose tissue-derived mesenchymal stem cells as a source of human hepatocytes. *Hepatology*, 46(1), 219–228. <https://doi.org/10.1002/hep.21704> Van Poll, D., Parekadan, B., Borel Rinkes, I. H. M., Tilles, A. W., & Yarmush, M. L. (2008). Mesenchymal stem cell therapy for protection and repair of injured vital organs. *Cellular and Molecular Bioengineering*, 1(1), 42–50. <https://doi.org/10.1007/s12195-008-0001-2> Esrefoglu, M. (2013). Role of stem cells in repair of liver injury: experimental and clinical benefit of transferred stem cells on liver failure.

Submitter
Gaidash Natalia
taliagaid2002@mail.ru - Russia

Presenter
Gaidash Natalia
taliagaid2002@mail.ru - Russia

#8659

High-intensity triple-frequency ultrasound for the prevention and treatment of complications

48 - Complications - avoidance and management

Gaidash N

Background/Objectives: MD, PhD, Dermatologist. Chief Editor of the Journal Apparatus Cosmetology. Dr. Gaidash has been a dermatologist since 1999. A regular speaker and participant at international congresses. A participant of research programs and scientific articles. Member of the: AAD, ASLMS, EADV, ISD, IDS TriActive clinic, Moscow

Submitter
Gaidash Natalia
taliagaid2002@mail.ru - Russia

Presenter
Gaidash Natalia
taliagaid2002@mail.ru - Russia

#8660

Plastic surgery patient. Before and after

49 - Lasers, EBDs & Light

Gaidash N

Background/Objectives: MD, PhD, Dermatologist. Chief Editor of the Journal Apparatus Cosmetology. Dr. Gaidash has been a dermatologist since 1999. A regular speaker and participant at international congresses. A participant of research programs and scientific articles. Member of the: AAD, ASLMS, EADV, ISD, IDS TriActive clinic, Moscow

Submitter
Lau Michael
michaelphlau@comcast.net - United States

Presenter
Michael Lau
MICHAELPHLAU@COMCAST.NET -

#8662

Anatomical considerations for non-invasive PRP Breast Rejuvenation and minimally-invasive Fat Transfer Breast Augmentation using PRP

43 - Anatomy related to non-or minimally invasive approaches

Michael L

Background/Objectives: Breast implant, whether filled with silicon or saline, is the traditional volume expansion medium used for breast augmentation. In developing an alternative option for breast implants which is minimally invasive, the author has been involved in using fat grafts as the medium to expand breast volume for augmentation, starting over 15 years ago. Platelet Rich Plasma (PRP) has been used with the fat transfer to enhance the viability of the fat grafts leveraging the regenerative effects of PRP. Fat transfer breast augmentation is now an acceptable minimally invasive procedure to enlarge the breasts if the patient desires to increase her breasts by one or at most two-cup size. PRP, by itself, since then has been used for multiple applications in aesthetic medicine and surgery, also in regenerative medicine. In the last few years, the procedure termed "Vampire Breast Lift" (VBL) has been popularized, claiming as a non-invasive way to lift and augment the breast by one even up to two cup size. VBL is done by injecting PRP into the breast tissues without any fat grafting involved. It is important to understand the anatomical considerations in evaluating and performing PRP Breast Rejuvenation or Fat Transfer Breast Augmentation to set proper and reasonable expectations, especially for the patients. The mechanism of action of the active media – PRP only, or fat grafts plus PRP - for the two procedures are very different, and therefore the placement of the active media for each procedure should be different accordingly. The anatomy of the breast is discussed, especially regarding to the fat deposits and supporting connective tissue structures of the breast which would affect the optimal placement of the active media. For Fat Transfer Breast Augmentation, the fat grafts with PRP are usually placed in the retrogladular fat deposits with placement in layers and tailored to the breast contour deficits. Whereas for PRP Breast Rejuvenation, the PRP is not directly acting as a volume expander, but as a regenerative agent with multiple beneficial rejuvenation effects, and therefore should be placed accordingly to strategic areas in the breast outside of the retrogladular fat.

Submitter
Lau Michael
michaelphlau@comcast.net - United States

Presenter
Michael Ph Lau
MICHAELPHLAU@COMCAST.NET -

#8663

Non-invasive regenerative rejuvenation of the labia majora as an alternative to the Labioplasty Majora surgery

47 - Genital restoration & Functional gynecology

Michael Ph L

Background/Objectives: The author, as a cosmetic vaginal surgeon, has performed thousands of labioplasty, involving labia minora, labia majora, or both, all under only local anesthetics. While such surgeries, even Colpoperineoplasty – commonly known as vaginal rejuvenation – can be done using only local anesthesia, effectively and safely, as ambulatory procedures; often patients still seek non-invasive alternatives to address their concerns over the look of the labia – such as laxity, redundancy, wrinkling and volume deficit of the labia majora. Labioplasty Majora surgery can certainly optimize the aesthetics of the labia majora. Also, the author has been using Colpoperineoplasty, when indicated, to address the aesthetics of the labia majora as well without the need of labioplasty majora. However, to address the concerns and needs of the patients requesting non-invasive aesthetic solutions for the labia majora, Labia Majora Rejuvenation has been developed using non-invasive methods such as injection of dermal fillers, with or without Platelet Rich Plasma (PRP); injection of PRP strategically placed in the labia majora; and microneedling with PRP. The mechanism and anatomical consideration for each method will be discussed.

Submitter
Tantanasrigul Pimpa
pimpa.tantanasrigul@gmail.com - Thailand

Presenter
Tantanasrigul Pimpa
pimpa.tantanasrigul@gmail.com -

#8664

Updates on the use of PRP and PRF for melasma and facial rejuvenation

51 - Regenerative aesthetics

Tantanasrigul P

Background/Objectives: Platelet-rich plasma (PRP) and platelet-rich fibrin (PRF) are autologous biostimulatory agents that has been widely practice in an aesthetic field. This session will provide an update knowledge and trend of PRP and PRF administration for skin conditions such as melasma, acne scar, augmentation and facial rejuvenation. Series of cases in real practice will be demonstrated in this session. A case with rare complication from PRP will also be shown and discussed.

Submitter
Lee Hyungjin
hyungjinl@naver.com - South Korea

Presenter
Hyung-jin Lee
hyungjinl@naver.com -

#8665

Ultrasonographic and Three-Dimensional Anatomical Analyses of the Nasoglabellar Area for Botulinum Toxin and Filler Injections: The Procerus Muscle and Intercanthal Vein

43 - Anatomy related to non-or minimally invasive approaches

Hyung-jin L

Background/Objectives: Botulinum neurotoxin and filler injections in the nasoglabellar area are widely used for facial rejuvenation procedures. The procerus muscle is a major target for addressing glabellar transverse lines, and the intercanthal vein is an important structure to avoid during nose augmentation with filler. Although many cadaveric studies have examined the procerus muscle and intercanthal vein, their comprehensive three-dimensional anatomy has not been thoroughly investigated. This study aimed to determine the three-dimensional anatomy of the intercanthal veins and procerus muscle in the nasoglabellar area, including their detailed location, depth, and relationship with various facial landmarks.

Methods: Korean and Thai cadavers were dissected, and healthy young Korean volunteers were recruited for ultrasonographic scanning and analysis.

Results: The intercanthal vein was observed in 70% of cases. It was found above the intercanthal line in 63.4% of cases and below in 7.3%. The intercanthal vein was 3.0 ± 0.6 mm below the skin's surface. The morphology of the procerus muscle was classified into two types based on ultrasonographic images obtained at the glabella. The procerus muscle was located deeper below the skin surface at the glabella than at the sellion (3.8 ± 0.7 mm versus 2.7 ± 0.6 mm). The width of the procerus muscle in ultrasonographic images increased from the sellion (10.9 ± 0.2 mm) to the glabella (14.5 ± 4.6 mm), while its thickness decreased (from 1.6 ± 0.6 mm to 1.1 ± 0.5 mm).

Conclusions: These findings provide valuable anatomical knowledge and reference information for injecting botulinum neurotoxin into the procerus muscle and filler into the nasoglabellar area.

Submitter
Lee Hyungjin
hyungjinl@naver.com - South Korea

Presenter
Hyung-jin Lee
hyungjinl@naver.com -

#8666

Ultrasonographic and Three-Dimensional Anatomical Analyses of the Corrugator Supercilii Muscle Regarding the Botulinum Neurotoxin Injection

43 - Anatomy related to non-or minimally invasive approaches

Hyung-jin L

Background/Objectives: This study aimed to determine the three-dimensional (3D) territory and depth of the corrugator supercilii muscle (CSM) using a 3D structured-light scanner.

Methods: Thirty-two hemifaces from Korean and Thai embalmed cadavers were used, and 35 healthy young Korean subjects also participated. A 3D analysis of the CSM territory and depth was performed using a structured-light 3D scanner. The most frequently observed locations of the CSM identified in the cadavers were confirmed in healthy young subjects using a real-time two-dimensional B-mode ultrasonography system.

Results: The CSM was present in all of the cadavers and healthy young subjects at the intersection point between the vertical line passing through the medial canthus and the horizontal line passing through the glabella (Point #6). In most cases, the CSM was located on the medial side of the lateral limbus. The most medial and most lateral origin points were at depths of 5.7 ± 1.4 mm (mean \pm SD) and 6.6 ± 1.4 mm, respectively; the corresponding depths of the insertion points were 5.4 ± 1.4 mm and 5.6 ± 2.1 mm, respectively. The origin and insertion points of the CSM were at similar depths. The recommended injection depth for botulinum neurotoxin (BoNT) into the CSM is around 4 mm.

Conclusions: Point #6 can be regarded as an effective target for managing the glabellar frown line and preventing palpebral ptosis when injecting BoNT into the CSM.

Submitter
Gonzalez Claudia
cpgonzalezmo@gmail.com - Colombia

Presenter
González Claudia
cpgonzalezmo@gmail.com -

#8667

Cold fractional Laser: a new concept to make skin spots a thing of the past

49 - Lasers, EBDs & Light

González C

Background/Objectives: COLD FRACTIONAL LASER: A NEW CONCEPT TO MAKE SKIN SPOTS A THING OF THE PAST Pigmentary disorders are among the primary concerns in the 21st century, with Melasma being one of the most common issues in dermatological and aesthetic treatments worldwide, significantly impacting the quality of life and self-esteem of our patients. Every day, we strive to find solutions that allow us to work without incapacity, avoid harming the skin, and achieve rapid and effective results. The multifactorial etiopathogenesis and diverse treatment alternatives complicate optimal management, often leading to therapeutic errors. Hence, comprehensive treatment is vital, aiming for synergy among various approaches to reduce response times, enhance skin quality, and exponentially decrease recurrence rates. A swift and accurate diagnosis is crucial in choosing the right treatment, which is primarily clinical, aided by diagnostic tools like Lumio, Woods lamp, dermatoscopy, and identifying possible triggers. Evidence supports the association of Melasma with UV rays, visible light, hormonal stimulation, irritating processes causing uncontrolled inflammation or continuous micro-inflammatory processes, elastosis, and high cortisol levels due to uncontrolled stress. Therapeutic response poses a significant challenge, with the primary goal being to maintain cellular matrix detoxification, ensure optimal cell function (melanocyte), improve elastosis, and stimulate fibroblasts to produce high-quality collagen. Therefore, combined treatments are recommended to target the various pathophysiological mechanisms involved in the disease's etiopathogenesis: 1. Oral and topical detoxification with bioregulatory medicine to reduce free radicals and oxidative stress inherent to this condition. 2. Very mild chemical peels to remove the stratum corneum and break desmosomal bonds, enhancing penetration of active ingredients from topical medications. 3. Stem cells and growth factors play a crucial role, promoting radiance, luminosity, and even skin tone alongside tranexamic acid and peptides, without drying out or irritating the skin. 4. Additionally, technologies such as Q-switch Nd:YAG lasers, cold fractional lasers, and IPL not only inhibit melanocytes but also improve collagen and elastin quality, addressing the vascular component present in over 65% of cases. Increased blood vessel number, size, and density are observed in Melasma. Elevated cytokine levels can affect vascularization, acting not only as reparative treatment but also in preventing further tissue damage. It's also crucial to educate patients on proper photoprotection, establish tailored skincare routines, maintain detoxification, and attend follow-ups. In my daily clinical practice, I integrate all available tools to improve not only pigmentation intensity but also skin quality, utilizing appropriate lasers, bioregulatory medicine, growth factors, and stem cells both in-clinic and at-home, along with oral therapy. This approach reduces recurrence rates and optimizes treatment response.

Submitter
Cabunac Zeljka
drzcabunac@yahoo.com - Serbia

Presenter
Cabunac Zeljka
drzcabunac@yahoo.com -

#8668

Endolaser and MABOT Fillers Technique for Lower Face Rejuvenation

45 - Combination treatments

Cabunac Z

Background/Objectives: Treating the lower third of the face with endolaser in combination with hyaluronic fillers is a highly effective non-surgical rejuvenation method. Given the significant impact of aging on bone and soft-tissue structures in the upper and middle thirds of the face, as well as changes in the neck region, adopting a complex, comprehensive approach is imperative to address the aesthetic concerns of the lower face. An individual treatment plan is crucial for optimizing and the better efficiency of both procedures. If there is tissue deficiency in the temple and chin regions, volumizing with hyaluronic fillers in those areas should be done first. In cases of dehydrated skin, mesotherapy cocktails are administered to prepare the skin and enhance the effectiveness of the laser procedure. When treating the lower face with a laser, it is necessary to apply the endolaser to the middle and lower thirds of the face, often extending it to the submandibular region as well. After the application of local anesthesia, the microfiber of the endolaser is inserted into the subcutaneous tissue to induce controlled heating of the tissue, stimulating collagen and elastin production for skin tightening and lifting in the treated areas. When, along with skin tightening, it is also necessary to melt local fat deposits, particularly in the submandibular region, the parameters of the endolaser are additionally adjusted. The initial skin tightening effects are obtained and visible immediately during treatment, with full results evident within three months. It has been recorded that improvement in results continues up to six months post-treatment due to ongoing collagen production. For lower jaw treatment, hyaluronic fillers are recommended three months after endolaser treatment, using a smaller amount of filler. It is advisable to first contour the middle third before treating the lower third with hyaluronic acid. Depending on individual patient's characteristics, the extent of age related changes in bone structures, and patient preferences, I decide on the technique of hyaluron application. I most often perform the MABOT technique for mandibular restitution. Very rarely, I opt for my patients for a complete contouring of the jawline. The nonsurgical restitution of the lower third can be achieved without changing of the mandibular shape, just by adding hyaluronic acid fillers to restore lost bone tissue. Many patients would like to keep their natural appearance. They are afraid of aesthetic procedures which are going to bring them different looks. My approach to mandibular reconstruction is to "add what has been lost", without changing the mandibular shape. I have developed the MABOT technique (mandibular bolus technique for mandibular region restitution) for injecting small boluses of high G prime hyaluronic acid fillers along the mandible. The added filler gives better support to the overlying skin tissue, resulting in rejuvenation of the lower third. Combining endolaser with hyaluronic fillers for skin tightening and rejuvenation of the lower third of the face gives superior aesthetic results, due to the synergistic effects of the both treatments.

Submitter
Cabunac Zeljka
drzcabunac@yahoo.com - Serbia

Presenter
Cabunac Zeljka
drzcabunac@yahoo.com -

#8669

Natural eyebrow lift with threads

46 - Threads

Cabunac Z

Background/Objectives: A change in the positioning of the eyebrows during aging contributes to a person appearing tired and sad. Some young people also have this look due to naturally lowered eyebrows. Using lifting threads to achieve a better appearance is a very simple procedure. The goal is to give patients a natural look, to rejuvenate and beautify the face. Adequate selection of the patient is very important, because this procedure is not suitable for everyone. A simple test, manual eyebrow repositioning, should be used to check how the eyebrows would look in the new position. If the patient's face looks better after this test, the patient is a suitable candidate for this procedure. Botulinum toxin should be injected into the forehead area two weeks before the eyebrow threads lifting procedure. In older patients where structural tissues changes have occurred in the upper third of the face, volume restitution with hyaluronic fillers in this region should be done before eyebrow lifting with threads. The work process is such that it requires hypercorrection of the eyebrows position, which passes a few days after intervention. Eyebrow thread lifting is a very effective, simple and minimally invasive aesthetic procedure that does not require a recovery period for patients.

Submitter
Cabunac Zeljka
drzcabunac@yahoo.com - Serbia

Presenter
Cabunac Zeljka
drzcabunac@yahoo.com -

#8670

Lip voluminisation for facial beautification and harmonisation

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Cabunac Z

Background/Objectives: One of the most common aesthetic procedures worldwide is lip augmentation with hyaluronic acid. The aim of each esthetic intervention should be beautification and rejuvenation of the patient. However, we can very often see the opposite effect due to an excessive lip augmentation which leads to drastic changes of the patient's profile. All these extreme changes are "less noticeable" in numerous photos of the patients posted on social media, while in flesh such effects are incomparably more expressed. To provide the patient with the best result after lip augmentation, it is necessary to make a good face analysis, both frontal and profile. Within the frontal facial analysis, horizontal and vertical analyses should be made. For facial profile analysis, I use Tweed-Merrifield profile line which gives in a very simple manner the guidance towards achieving a harmonious appearance of the patient.. In lip augmentation procedure, it is necessary to avoid pattern approach and creation of copies of the same form of lips with all patients, without taking into consideration their individuality. In case of patients where it is necessary, along with lip augmentation, to make correction of the surrounding structures, all such interventions should be included in the therapy plan. In my work I hold to the principle that an advantage should be given to minor corrections of the volume in comparison to big increases. If, however, a bigger correction of lip volume is needed and justified, it should be reached through gradual addition of hyaluronic acid into lips in several sessions.

Submitter
Sattar Khan Deebea
docchaand@gmail.com - Pakistan

Presenter
Deebea Sattar Khan
docchaand@gmail.com -

#8671

Melasma Treatment With EZGEL

41 - Pigmentation

Deebea S

Background/Objectives: PRF stands for platelet-rich fibrin, which is a type of blood concentrate that uses your own blood to help rejuvenate your skin. It is similar to PRP (platelet-rich plasma), but it has a higher concentration of platelets, stem cells, growth factors and fibrin. PRF can be injected into the skin to address signs of aging, hair loss, or skin healing. Some of the benefits of PRF are that it uses your body's own cells, has minimal risk of side effects, stimulates skin healing, and can potentially improve hair loss under-eyecircles Gel was giving better effects even after first sitting of injection as compared to PRF. Besides few patients faced hyperpigmentation after micro needling. Results show decrease in hyperpigmented patches decrease in their size and intensity. Marked improvement in 2 months PRF easy gel has been shown to the same and effective treatment for melasma with minimal side effect.

Methods: Take blood from patient in a tube that has clot activator to enhance plasma separation. spin on slow speed. 15mins at 400 to 600 rpm. Blood is balanced in the other tube by water in a centrifuge machine. Lowering the RPM controls and reduces the G-forces it results in an increase in cell number, platelets, growth factors such as vascular endothelial growth factor (VEGF) transforming growth factor. After centrifuge three layers are obtained. Red blood cells at the bottom, A buffy coat (clot) consisting of leucocytes and platelets in the middle PRF plasma at the top. The PRF made at the top is removed from the test tube with the help of syringe. Its centrifuged again at a slow spin of 400rpm for 5mins in plain tubes again. This will remove any blood products in it. Pull out the PRF in a syringe. put it in the boiler at 70 degrees for 3 mins . U will be able to see the liquid changing into opaque material. Shift the syringe in the fridge for about 3-5 mins, EZ gel is ready to be injected.

Results: We saw marked improvement in patients Melasma after injecting EZgel PRF even after first injection. The intensity and area of melasma had markedly improved. Patients were given three sittings and their melasma became bare minimum. It also gave temporary volume to the area and cheeks augmentation was easy. Although volume was lost in about 3 days but after 3rd sitting even volume persisted for about 60%.

Conclusions: Melasma can be devastating for female patients. If we try using the organic ways in which patients own blood is used to treat the melasma. It shows better result even after first sitting. The PDGF repair the blood vessel and help in collagen production. TGF-B helps in growth of epithelial and endothelial cells promoting the healing. KGF promotes growth and new generation of keratinocytes. PgF repairs the tissue and promotes cell growth collagen production. EGF promotes epithelial cell growth angiogenesis promotion of wound healing.

References: Sarkar R, Arora P, Garg VK, Sonthalia S, Gokhale N. Melasma update. Indian Dermatol Online J. 2014;5(4):426-435. 2. 10. Wasterlain AS, Braun HJ, Harris AH, Kim HJ. The systemic effects of platelet-rich plasma injection. Am J Sports Med. 2013;41:186-193. [PubMed] 3. Hatakeyama I, Marukawa E, Takahashi Y, Omura K. Effects of platelet-poor plasma, platelet-rich plasma, and platelet-rich fibrin on healing of extraction sockets with buccal dehiscence in dogs. Tissue Eng Part A. 2014;3:874-82. [PMC free article] [PubMed] [Google Scholar] 4. Scalfani AP. Safety, efficacy, and utility of platelet-rich fibrin matrix in facial plastic surgery. Arch Facial Plast Surg. 2011;13:247-51. [PubMed] [Google Scholar] 5. Galindo-Moreno P, Fernández-Barbero JE, Avila-Ortiz G, Caba O, Sánchez-Fernández E, Wang HL. Flow cytometric and morphological characterization of platelet-rich plasma gel. Clin Oral Implants Res. 2006;17:687-93. [PubMed] [Google Scholar]

Submitter
Lebbar Noura
dott.noura.lebbar@gmail.com - Italy

Presenter
Lebbar Noura
dott.noura.lebbar@gmail.com -

#8675

The hybrid bio-lips lift technique

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Lebbar N

Background/Objectives: The shape and fullness of the lips have a significant role in facial aesthetics and outward appearance. The corrective needs of a patient can range from a subtle enhancement to a complete recontouring including correction of perioral rhytides. A comprehensive understanding of the lower face anatomical features and injection site techniques are foundational information for injectors. Likewise, the choice of filler material contributes to the success of the injection techniques used, and facilitates a safe, effective, and natural appearing outcome. The review will be about exposing the benefits of the hybrid bio-lips lifting russian lips & cannula contemporary in order to obtain the most safe & natural result.

Methods: The hybrid bio lips lift is based on using 2 techniques russian lips with 30 g 13 mm needle as a first step then & 23 g 50mm blunt cannula. Usually to achieve a perfect lip volumization we need to use a big amount of ha filler more than 1 ml . In order to obtain a natural result, the layer of injection should be in the submucosa layer which is a very dangerous vascular area as the main labial arteria superior & inferior are present there. I have treated 2 patients: the first patient is 53 years old, she has never performed any lips filling in past, she desired an extreme natural result. I have used a filler with (hybrid bio linked technology) lidocaine 20 mg/ml 0.4 ml in total with 23g 50 mm blunt cannula with 2 entry points both on the modiolus. That allows me to treat the upper and lower lips using the same entry point; I have performed a local anesthesia injecting on the entry point 0.1 ml in each using 2% lidocaine with epinephrine to ensure the maximum comfort to the patient. I also applied topical anesthesia containing 10% lidocaine and 5% prilocaine on the whole lip. Then I performed russian lips technique using 0.4 ml of Hyaluronic acid with 30 g needle 13mm length, my entry points were 1 mm above the vermillion, and I entered every 2 mm with my needle until I covered all the superfcy of the upper lip beginning from the cupid's bow and ending at oral commissure.

Results: The result of the russian lips technique used is a very important reduction of the nasolabial space which give a fresh and younger look and an important improvement of the smoker lines. One of the advantage also of the technique of the blunt cannula to fill the lips is that it allows me to reshape the oral commissures and and to elevate the oral angle giving a younger and happier look.

Conclusions: Both the technique & ha filler choice in addition to the perfect anatomy knowledge are primordial to obtain the most natural safe result in lip enhancement. The hybrid bio-lips lift technique is a revolutionary technique allowing to get important lip volume enhancement & a perfect lip contouring and shaping in the most natural & safe way

References: Cooper H, Gray T, Fronek L, Witfill K. Lip Augmentation With Hyaluronic Acid Fillers: A Review of Considerations and Techniques. *J Drugs Dermatol*. 2023 Jan 1;22(1):23-29. doi: 10.36849/JDD.6304. Walker L, Cetto R Lip Augmentation Using Hyaluronic Acid Filler and a 4-mm Needle: A Safer, More Natural, and Predictable Approach *J Clin Aesthet Dermatol*. 2021 Jan;14(1):E61-E63. Epub 2021 Jan 1

Submitter
Lebbar Noura
dott.noura.lebbar@gmail.com - Italy

Presenter
Lebbar Noura
dott.noura.lebbar@gmail.com -

#8676

A NEW APPROACH FOR VOLUME FACE RESTAURATION: MUSCLE BIOMODULATION

49 - Lasers, EBDs & Light

Lebbar N

Background/Objectives: Since years the focus in aesthetic medicine was on volumizing the face using fillers, obviously more we fill increasing the volume of the zygomatic area & the middle cheek more the face is lifted following the simple physics's rules. The results on our patients is the overfilled syndrome commonly known as pillow face that we see very often even in celebrities. The new trend is to stop the aging process with autologous regenerative medicine. Almost all the energy based devices are supposed to have an action on the dermis or on the fat layers what about the muscles' aging? The only injectable which has a target the muscles is the botulinum toxin. Although it leads after many years of use to muscles' atrophy, as we know perfectly specially for the frontalis muscle which is the only lifting muscle for the upper face. The consequence of the frontalis muscle atrophy is an obvious augmentation of the wrinkles and also an eyebrow ptosis. What's more we need to consider that the muscles under grow an important aging leading to sarcopenia in extreme cases. Considering that face muscles represent 60% of the face form, then there is 20% skin, 10% fat and 10% bone. As a consequent face muscle restoration would be the main antiaging procedure. Working on muscles is the new trend in face contouring : I have been using since the last 3 years the diathermocontraction : a Simultaneous Generation Bipolare Radiofrequency & muscles contractions Acknowledging perfectly face muscle anatomy, we can focus while using the diathermocontraction on the lifting muscles of the face and on the sustaining ligaments. RF diathermy treatment reduces wrinkles and cutaneous ageing, with selectively treating the deeper dermal and subdermal layers, while muscle contraction can cause a 20% increase in the thickness of the zygomatic major muscle, in conjunction with improvements in the subjective perception of facial attributes associated with aging. Overall, combined effects of diathermy and contraction can also stimulate both satellite cells activation, able to regenerate and strengthen the existing muscle fibers through differentiation, and the release of Heat Shock Proteins (HSP), signaling molecules promoting muscle protein synthesis and muscle hypertrophy. The effects of the radiofrequency are well known since years: the improvement of the blood microcirculation leading to the increase of tissue oxygenation and the release of the IGF insulin growth factors, the FGF Fibroblast growth factor and VEGF vascular endothelial growth factor. Bibliography The Diathermocontraction will not modify the harmony in mimics muscles of the face, it is based only on a pure muscle regeneration and volume augmentation. The possibility to place the electrodes on each targeted lifting muscle and to be dynamic during the treatment is primordial to personalize the treatment according to the patient needs. Face stim is the new promoting technique to obtain the very requested V shape face in a conservative way.

Submitter
Decangchon Francis
decangchonfrancis@yahoo.com - Philippines

Presenter
Decangchon Francis
decangchonfrancis@yahoo.com -

#8681

FOX (SNATCHED) EYES THREADLIFT, ANCHORING TECHNIQUES TO PROLONG & OPTIMIZE RESULTS: TIPS & TRICKS

46 - Threads

Decangchon F

Background/Objectives: This procedure helps to enhance the anatomy of the shape of the eye and is a must for those who like a straight flared brow like Bella Hadid, Kendall Jenner or Kim Kardashian. Since over time your eyes and brows have drooped making you look more tired, weary & older. It does not only open the eyes but can also be included with a midface lift to smoothen the under eyes and lift the cheek. You can get this designer eye look and improve the look of your eyes and better yet return to work the next day! This is usually performed on younger women who desire a strong swept brow especially those with accompanying heavy or droopy upper eyelids. Although the almond shaped eye can harmonize with the angle of the brow, this can be performed on any shape of the eyes. Pointers and tips will be presented to show how this quick, minimally invasive, out-patient, no down time, 30 minute procedure, can be done under local infiltration anesthesia, with the patient not experiencing pain nor discomfort, using PDO Cog Threads. Techniques of anchoring the distal portion of the thread will likewise be demonstrated to enhance the anchoring capability and prolonging the suspension effect of the procedure thus increasing the length of time for the patient to continue enjoying the benefits of this procedure more than the usual “insert & snip” thread lift technique.

Submitter
Kowitwibool Kritsada
doctorkritsada@gmail.com - Thailand

Presenter
Kowitwibool Kritsada
doctorkritsada@gmail.com -

#8682

Essential anatomy for Threadlift

43 - Anatomy related to non-or minimally invasive approaches

Kowitwibool K

Background/Objectives: Aging face is one of the most common problem that patients come to consult Facial Plastic and Reconstructive surgeons. Aging process is composed of laxity of skin, facial ligaments and depletion of fat volume.

Submitter
Kowitwibool Kritsada
doctorkritsada@gmail.com - Thailand

Presenter
Kowitwibool Kritsada
doctorkritsada@gmail.com -

#8683

Minimally Invasive Brow Lift

56 - Minimally invasive surgery / Minimally invasive advances

Kowitwibool K

Background/Objectives: Aging face is one of the most common problems that patients come to consult Facial Plastic and Reconstructive surgeons. Aging process is composed of laxity of skin, facial ligaments and depletion of fat volume. Eyebrow is one of the challenging areas. Pathophysiology of aging brow caused by decreasing elasticity of forehead, temple and glabellar skin. The brow descends below the supraorbital rim, causing temporal hooding.

Submitter
Reith Bruce
brucereith@me.com - Germany

Presenter
Reith Bruce
Brucereith@me.com - Germany

#8685

Improvement of therapeutic approaches for genetic hair loss as well as their support in hair transplants through standardization based on evidence based medicine. An in-depth overview.

52 - Hair restoration

Reith B¹

¹Medical office Dr. Reith, Munich, Germany

Background/Objectives: Congenital hair loss, also known as androgenetic alopecia, has a significant impact on a person's self-confidence and quality of life and can even lead to depression. The miniaturization of hair follicles is the histological feature of AGA. This process does not progress synchronously and therefore differs from other forms of hair loss. Therapies only show effectiveness when intact hair follicles are still present! Therefore, an early diagnosis and initiation of AGA treatment are crucial for success. Although Minoxidil and Finasteride are mainly used for AGA treatment nowadays, current studies suggest that biological treatments with PRP, exosomes, and low-level laser therapy are effective alternatives with fewer side effects. Their effectiveness can be further improved through combination therapy. The issue of varying efficiency with the same therapeutic approach is not always due to the patient, but often to an improperly executed treatment concept by the physician. A prerequisite for successful AGA treatment is standardized procedures based on evidence-based medicine.

Submitter
Settipalli Abs
abss@tuta.io - United Kingdom

Presenter
Settipalli Abs
abss@tuta.io - British Indian Ocean Territory

#8686

World record collagen and elastin production

44 - Treatment with Injectables (Botulinum toxin & dermal fillers)

Settipalli A

Background/Objectives: To see how we can generate the highest amount of collagen and elastin of any injectables on the market To generate more types of collagen of any injectables on the market

Methods: Injecting specific amino acid profiles with specific hyaluronic types in specific combinations to illicit the highest response

Results: This specific amino acid/HA profile generated more collagen types as well as the highest type 4/7 and the highest amount of elastin ever recorded. It also generated fibronectin which no other product on the market is able to achieve.

Conclusions: Cells respond to exact and specific ratios of amino acids as well as hyaluronic acids to give specific responses such as protein synthesis

References: Too many to list here, data is also available

Submitter
Rodríguez Jesús
jrodrilas@uax.es - Spain

Presenter
Rodríguez Lastra Jesús
jrodrilas@uax.es - Spain

#8691

TREATMENT OF CELLULITE USING TOPICAL LIPOLYTIC ENZYMES AND ENERGY USING A FOUR-CHANNEL EBD

50 - Body contouring & skin tightening

Rodríguez Lastra J¹, Kousier S

¹Universidad Alfonso X El Sabio, Villanueva de la cañada, Spain

Background/Objectives: Cellulite, also known as nodular liposclerosis is a complex disorder of the skin's architecture that results in dimpling at the surface level that is commonly known as orange peel. It has been reported that between 80 and 90% of women over 20 years of age suffer from this condition. Radiofrequency (RF) devices or Energy-Based Devices (EBD) are preferred over many of the traditional aesthetic methods. The use of lipolytic enzymes mixed with hyaluronidase and collagenase in dermatology has been applied topically with little evidence. No publications on cellulite are found. The aim of this study is to combine the use of radiofrequency with the application of topical enzymes and evaluate the reduction of cellulite in women.

Methods: A total of 20 women were studied and divided into two groups: a group of 10 was administered radiofrequency and the other had enzymes added, which were diluted in 5 cm³ of physiological saline and 2.5 cm³ were applied with the active plates. . placed on the thighs for 10 minutes and the rest with capacitive and resistive electrodes, massaging energetically for 10 more minutes. Ultrasound and measurement of the diameter of the treated area were performed.

Results: - The energy-based device was applied is a reduction of 6.1 cm in diameter for the energy treatment alone, and when the application of energy is carried out in conjunction with enzymes the loss is 14.8 cm. The average of the three ultrasound measurements of thigh fat shows a difference of 8.77 mm after treatment with energy alone, while when combined with enzymes the loss is 14.64 mm. The ANOVA test gives a statistically significant difference $p=0.001$.

Conclusions: The combined use of the high-potency EBD Capenergy C4.0 and enzymes has been shown to be effective for the reduction of cellulite in women, decreasing the diameter of the treated area and the appearance of the skin. This research opens a new path in the treatment of this pathology, which makes patients so uncomfortable due to its aesthetic consequences.

References: 1. De La Casa Almeida M, Suarez Serrano C, Medrano Sánchez EM, Diaz Mohedo E, Chamorro Moriana G, Rebollo Salas M. The efficacy of capacitive radio-frequency diathermy in reducing buttock and posterior thigh cellulite measured through the cellulite severity scale. *J Cosmet Laser Ther*. 2014 Oct;16(5):214-24. 2. Fritz K, Salavastru C, Gyurova M. Clinical evaluation of simultaneously applied monopolar radiofrequency and targeted pressure energy as a new method for noninvasive treatment of cellulite in postpubertal women. *J Cosmet Dermatol*. 2018 Jun;17(3):361-364. 3. Jabbour R, Farah F, Mallat F, Saad E, Semaan K, Haber R, Helou J. Efficacy and safety of the enzymatic mixture - Lipase, collagenase and hyaluronidase - In the treatment of moderate to severe submental fat: A prospective cohort study. *Heliyon*. 2024 Feb 10;10(4):e25759.

Submitter
Rodriguez Jesús
jrodrilas@uax.es - Spain

Presenter
Rodriguez Lastra Jesús
jrodrilas@uax.es - Spain

#8692

Body contour with reduction of subcutaneous and visceral fat using energy-based device with a high-power amplifying effect and exercise: Follow-up at six months.

50 - Body contouring & skin tightening

Rodriguez Lastra J¹, Kouser S

¹Universidad Alfonso X El Sabio, Villanueva de la cañada, Spain

Background/Objectives: Use of electromagnetic energy as an alternative to surgical procedures for subcutaneous fat reduction has gained popularity in recent years. This pilot study, the effects of using amplified radio-frequency energy in the medium wave delivery range, in conjunction with exercise intervention, were investigated for their potential reduction of abdominal subcutaneous and visceral fat. The study aimed to evaluate effects of combined intervention on the volume of abdominal fat, analyzing changes in lipid profile, metabolic factors, and inflammatory markers.

Methods: 34 participants were selected and assigned to a 10-day intervention utilizing a Capenergy device. Every weekday of except Saturday and Sunday. Application of amplified energy through a belt covering abdominal area, area of 800 cm² followed by 45-minute submaximal aerobic exercise. Measurements were conducted pre-treatment and after the intervention. Lipid profile, leptin, insulin, and protein C were measured. Body fat was measured by MRI of the entire abdomen. Follow-up measurements were also taken at the 6-month mark.

Results: Statistically significant decrease in both subcutaneous and visceral fat in the abdominal area, as well as a decrease in weight, waist-to-hip, and all biochemical values, without side effects, just a slight redness. These effects on abdominal fat were maintained at the 6-month follow-up with no reports of regaining fat.

Conclusions: Utilization of amplified radiofrequency with an abdominal belt with static electrodes with temperature sensors, together with exercise intervention has significant potential for reducing abdominal subcutaneous and visceral fat, while also improving associated factors safely and effectively even after a follow-up period.

References:1. Chang SL, Huang YL, Lee MC, et al. Long-term follow-up for noninvasive body contouring treatment in Asians. *Lasers Med Sci.* 2016;31(2):283-287. 2. Hombrados Balza MJ, Rodríguez Lastra J, Arroyo Fernández RL. Improvement of body contour in young women using a high-power radiofrequency device. *J Cosmet Laser Ther.* 2021 Nov 17;23(7-8):195-201. 3. Rodríguez Lastra J, Cardona YG. Loss of subcutaneous fat in 20 patients, both sexes, using a second-generation TECAR device of 1.240 Watts and results analyzed with magnetic resonance. *J Cosmet Dermatol.* 2024 Mar;23(3):869-875. 4. Franco W, Kothare A, Ronan SJ, Grekin RC, McCalmont TH. Hyperthermic injury to adipocyte cells by selective heating of subcutaneous fat with a novel radiofrequency device: Feasibility studies. *Lasers Surg Med.* 2010;42(5):361-370.

Submitter
Dhir Anup
dranupdhir@hotmail.com - India

Presenter
Dhir Anup
dranupdhir@hotmail.com - India

#8695

Microfat and NanoFat grafting by Lipocube alongwith PRP and microneedling for facial rejuvenation

51 - Regenerative aesthetics

Dhir A¹

¹APOLLO HOSPITALS, New delhi, India

Background/Objectives: This presentation describes the preparation of nanofat by lipocube for injection into facial rhytids. The facial rejuvenation is done by injection of micro fat, nanofat and PRP followed by microneedling. The nanofat can be injected in rhytids like a filler. Platelet-rich plasma is blood plasma that has been enriched with platelets. As a concentrated source of autologous platelets, PRP contains several different growth factors and other cytokines that can stimulate facial rejuvenation. The conclusion drawn is that nanofat and PRP injection along with microneedling improves the facial rhytids and rejuvenates the facial skin.

Submitter
Dhir Anup
dranupdhir@hotmail.com - India

Presenter
Dhir Anup
dranupdhir@hotmail.com - India

#8696

Minimally invasive male breast reduction

50 - Body contouring & skin tightening

Dhir A¹

¹ APOLLO HOSPITALS, New delhi, India

Background/Objectives: Gynaecomastia is a common problem needing surgery. This presentation describes the principles of the minimally invasive male breast reduction in which liposuction is combined with minimally invasive male breast reduction through the same port, resulting in minimal scarring and quick recovery. The technique and instrumentation is described along with results and complications encountered in our series.

Submitter
Dhir Anup
dranupdhir@hotmail.com - India

Presenter
Dhir Anup
dranupdhir@hotmail.com - India

#8697

Dangers of herbal and dietary supplements in Dermatosurgery

77 - Unclassified topics

Dhir A¹

¹APOLLO HOSPITALS, New delhi, India

Background/Objectives: Recent popularity of alternative & complementary medicine has resulted in many people taking these herbal and dietary supplements which are available over the counter. Despite their natural characteristics, these remedies have the potential to cause increased bleeding in surgical patients, so a comprehensive review of bleeding risk of these products is presented. In addition to being aware of these adverse effects, surgeons must adequately screen all patients and educate them on the possible dangers associated with these treatments. Bleeding risks of prescription and Homeopathic medicines are also discussed.

Submitter
Dhir Anup
dranupdhir@hotmail.com - India

Presenter
Dhir Anup
dranupdhir@hotmail.com - India

#8698

Labiaplasty surgery

47 - Genital restoration & Functional gynecology

Dhir A¹

¹ APOLLO HOSPITALS, New delhi, India

Background/Objectives: This presentation describes the anatomy, classification, indications and various techniques for aesthetic labiaplasty. The criterion for patient selection is also discussed. The various techniques are explained with help of graphics. The authors series of labiaplasty is also presented along with post operative results and incidence of complications.

Submitter
Chen Chien Ming
rosw23@gmail.com - Taiwan

Presenter
Chen Chien-ming
rosw23@gmail.com - Taiwan

#8699

How to use sonography to differentiate different filler and its complication management

48 - Complications - avoidance and management

Chen C¹

¹Belleesse Dermatologic Clinic, Taipei, Taiwan

Background/Objectives: The demand of non-surgical facial filler injection is constantly increasing. The vogue was created also by celebrity and social media and widely accepted by the public in recent years worldwide. Aesthetic physicians use these filler almost every region in the face, including forehead, temples, cheeks, zygoma, nose, lip and chin. However, some consultants or physicians persuade their patients to have large amount of filler injection in a short period of time and end up with overfilled syndrome. It's more complicated that most victims have different filler used at the same area in different treatment session. Good history taking is crucial for clinician to understand the enemy we're facing. Moreover, facial sonography is a powerful weapon to help us clarifying the real culprit filler causing overfilled syndrome. Here I'm going to share my personal experience of using sonography to diagnose and tackle the overfilled filler.

Submitter
Jeoung Taewook
doctor1@exocobio.com - South Korea

Presenter
Jeong Tae Wook
doctor1@exocobio.com - South Korea

#8702

The Efficacy of Adipose Stem Cell-derived Exosomes in hair regeneration based on the pre-clinical and clinical study

52 - Hair restoration

Jeong T¹

¹Anti-aging and Senior Care Clinic, Busan, South Korea

Background/Objectives: Androgenetic alopecia (AGA) is a prevalent hair loss disorder with psychological repercussions. Traditional treatments have limitations, leading to the exploration of regenerative therapies such as exosomes derived from adipose tissue stem cells (ASC-Exosomes).

Methods: First, using human hair follicle dermal papilla cells (hDPCs) treated with ASC-Exosomes, ALP, VCAN, β -catenin, and LEF-1 levels with RT-PCR and p-GSK3 β , GSK3 β , β -catenin, ALP, and β -actin levels with western blot analysis were assessed. Hair shaft elongation test and assay for ALP, Ki-67, and β -catenin were done using human hair follicle organ culture. Patients with AGA had ASC-Exosomes treatment and were evaluated for hair counts, photographic assessments, subjective satisfaction, and safety profiles.

Results: ASC-Exosomes impact hDPCs, increasing proliferation and the upregulation of hair growth-related genes, including ALP, VCAN, β -catenin, and LEF-1. The Wnt/ β -catenin pathway was activated, indicating their role in promoting hair growth. ASC-Exosomes also promoted hair shaft elongation and ALP activity, suggesting a potential for hair regeneration. 30 participants with AGA enrolled and treated over 24 weeks. The subjects experienced a significant increase in total hair density, improved global photographic assessments, and reported higher subjective satisfaction without severe adverse reactions.

Conclusions: This research contributes to the growing body of evidence supporting the use of exosomes in hair loss treatment, offering a safe and effective alternative for individuals dealing with AGA.

Submitter
Jeoung Taewook
doctor1@exocobio.com - South Korea

Presenter
Jeong Tae Wook
doctor1@exocobio.com - South Korea

#8703

Therapeutic potential of mesenchymal stem cell-derived extracellular vesicles in SARS-CoV-2 and H1N1 influenza-induced acute lung injury

77 - Unclassified topics

Jeong T¹

¹Anti-aging and Senior Care Clinic, Busan, South Korea

Background/Objectives: Mesenchymal stem cell (MSC)-derived extracellular vesicles (EVs) have shown anti-inflammatory potential in multiple inflammatory diseases. In the March 2022 issue of the Journal of Extracellular Vesicles, it was shown that EVs from human MSCs can suppress severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) replication and can mitigate the production and release of infectious virions (Chutipongtanate et al., 2022). We therefore hypothesized that MSC-EVs have an anti-viral effect in SARS-CoV-2 infection in vivo. We extended this question to ask whether other respiratory viral infections might also be affected by MSC-EVs. Adipose stem cell-derived EVs (ASC-EVs) were isolated using tangential flow filtration from 20 L of conditioned media obtained from a multi-flask cell culture system. The effects of the ASC-EVs given intravenously were tested on SARS-CoV-2 infection in Vero E6 cells in vitro as well as on in vivo infection with the same virus in Syrian hamsters. Further, the effects of the ASC-EVs were also tested in influenza type A infection in mice. The ASC-EVs attenuated SARS-CoV-2 virus replication in Vero E6 cells and reduced body weight and signs of lung injury in infected Syrian hamsters. Furthermore, ASC-EVs increased the survival rate of influenza A-infected mice and attenuated the signs of lung injury. In summary, this study suggests that ASC-EVs can have beneficial therapeutic effects in models of virus-infected acute lung injury and may potentially be developed to treat lung injury in humans.

Submitter
Goo Boncheol Leo
boncheolgoo@gmail.com - South Korea

Presenter
Goo Boncheol
boncheolgoo@gmail.com -

#8704

Neck wrinkle treatment by noble dual-depth microneedling radiofrequency device

49 - Lasers, EBDs & Light

Goo B

Background/Objectives: Background: Neck wrinkles or furrows are challenging problems in anti-aging treatment of the skin. Many approaches have been given until now, nevertheless newer, noble therapeutic approaches are continuously being attempted. Novel microneedling device targeting simultaneously both papillary dermis and reticular dermis were introduced and thought to be thought to be effective targeting the wrinkles of the neck. Objective: To evaluate the effectiveness of dual-depth microneedling radiofrequency treatment for the improvement of the neck wrinkles

Methods: 24 patients with moderate to severe neck wrinkles were enrolled to the study. Two treatment sessions were given with 4 weeks interval. 1- and 3-month visits after the treatments followed and recorded. Improvement was scored with the measures of variables, including Global assessment scoring (GAS) using patient photos by the blinded experts. Patient satisfactory rating using Visual analog scales were also assessed.

Results: Overall, general improvement was observed in most of the subjects. Side effects or complications were not observed.

Conclusions: Novel dual-depth microneedling radiofrequency treatment turns to be effective and safe for the improvement of the neck wrinkles.

References: Gentile RD et al Radiofrequency Technology in Face and Neck Rejuvenation. Facial Plast Surg Clin North Am. 2018 May;26(2):123-134. Sturm A et al Nonsurgical Rejuvenation of the Neck. Clin Plast Surg. 2023 Jul;50(3):497-507 Xiao B et al A retrospective study of neck rejuvenation using a noninsulated microneedle radiofrequency in Chinese subjects. Lasers Med Sci. 2021 Aug;36(6):1261-1266.

Submitter
Boiko Mykola
profboiko@gmail.com - Ukraine

Presenter
Boiko Mykola
profboiko@gmail.com -

#8705

Androgens Effects on Hair Follicles. Male androgenetic alopecia and Post-Finasteride Syndrome

52 - Hair restoration

Boiko M

Background/Objectives: The hair cycle and hair follicle structure are highly affected by various hormones. Androgens-such as testosterone(T), dihydrotestosterone(DHT), and their prohormones - are the key factors in terminal hair growth. They bind to intracellular androgen receptors in the dermal papilla cells of the hair follicle. The majority of hair follicles also require the intracellular enzyme 5-alpha reductase to convert T into DHT. Androgenetic alopecia (AGA) is the most common form of hair loss consisting of a characteristic receding frontal hairline. Although a variety of medical, surgical, light-based and nutraceutical treatment options , it can be challenging to select appropriate therapies for this chronic condition. The literature has shown finasteride to be effective in treating patients with AGA and long-term use of up to 5 years has shown significant hair growth and permanent stabilization of hair loss. However, finasteride and dutasteride can trigger an enduring sexual dysfunction that persisted even after stopping treatment. This includes erectile dysfunction, libido disorders, ejaculation disorders and orgasm disorders that continued after discontinuation of finasteride. Additional finasteride effects that can occur independently of any sexual difficulties but may also accompany sexual problems include: cognitive impairment depression, suicidality. Men who take finasteride for at least 205 days are almost 5 times more likely to develop PFS than men who take it for a shorter period. The studies demonstrated sexual symptoms persisting close to 4 years after discontinuation of treatment. Due to the risk of sexual side effects, clinicians should exercise caution when treating AGA patients with finasteride. The International Post-Finasteride Syndrome(PFS) Foundation was established to provide public education and support for those patients living with PFS. The World Health Organization Programme for International Drug Monitoring's database currently contains 21 274finasteride adverse drug reaction, including 3725 reports of erectile dysfunction, 5204 reports of psychiatric disorders. Additionally, the database currently contains 103 cases of completed suicide.

Submitter
Boiko Mykola
profboiko@gmail.com - Ukraine

Presenter
Boiko Mykola
profboiko@gmail.com -

#8706

PRP+HA therapy of the penile tunica albuginea fibrosis (Peyronie's disease)

47 - Genital restoration & Functional gynecology

Boiko M

Background/Objectives: Background. Prevalence rates of Peyronie's disease (PD) are 0.4-9%. The purpose of this study is to evaluate the effectiveness of treatment with platelet-rich plasma (PRP+HA) injections into the induration of the tunica albuginea in patients with PD. [1].

Methods: Methods. 59 patients with PD on early stages, who had not received any previous local treatment were enrolled. Deformation angle was measured on photographs of fully erected penis. They were divided into 2 groups: first (n=32) overcame intralesional PRP+HA injections and the second (n=27) intralesional injections of sodium chloride 0.9%. We evaluated the curvature angle changes, plaque size, plaque softness, erectile function (IIEF-5), pain presence using ultrasound and questionnaires. F-test was used for statistical analysis. Autologous venous blood was collected into 4 separator gel containing tubes (each 8 ml – 2 ml gel and 6 ml of blood) and centrifuged for 10 minutes at 1700 g. 21G needles were used for collection. At the end of the centrifugation, red blood cells were trapped under a separator gel, while platelets were settled on its surface. The lower 1/3rd of plasma located above the separator gel [2] was collected into syringes (6 ml total). Procedures were made under local anesthesia with 1 ml of 2% lidocaine. 6 ml of PRP+HA were injected into the plaque. 4 Injections were made with interval of two weeks between each. Then 2 injections with 2 weeks interval between after 1-month period repeated few times. All patients had at least 10 procedures.

Results: Results. Observations were made 6 months after injections. We saw the curvature angle decrease in 50% of patients from the first group and in 22.2% of patients from the second group. Plaque decreased in size in 50% and in 14.8% patients respectively. 59.4% of patients achieve plaque softening comparing to 29.6% of patients from the control group. The difference in IIEF-5 scores revealed erectile function enhancement in 56.3% of patients in the researched group, whereas the percentage in the control group was significantly lower - 3.7%. Moreover, pain reduction was noticed in 84%, when the part in the second group was as low as 29.6%. All results are statistically significant.

Conclusions: Conclusions. Treatment of Peyronie's disease with PRP+HA plaque injections helps to reduce disease progression in most patients. This method has no significant side effects. More deep researches are considered to be induced regarding this topic.

References: Virag, R., Sussman, H., Lambion, S., & de Fourmestreaux, V. (2017). Evaluation of the benefit of using a combination of autologous platelet rich-plasma and hyaluronic acid for the treatment of Peyronie's disease. *Sexual Health Issues*, 1(1). Dhurat, R., & Suresh, M. (2014). Principles and Methods of Preparation of Platelet-Rich Plasma: A Review and Author's Perspective. *Journal of Cutaneous and Aesthetic Surgery*, 7(4), 189–197.

Submitter
Tbarani O'shea Julia
drjuliah@likhaaesthetic.ie - Ireland

Presenter
Tbarani O'shea Julia
drjuliah@likhaaesthetic.ie - Ireland

#8708

Non surgical Rhinoplasties the most satisfying yet daunting high risk treatment in aesthetic medicine. Is cannula safer than needle?

45 - Combination treatments

Tbarani O'shea J

Background/Objectives: Understanding the nuances between tools and customizing the approach to meet individual needs is crucial for achieving optimal results, particularly for individuals with ethnic morphology. Threads are often more suitable for those with tighter skin, flatter bridges, and bulbous tips, as they can establish a refined and robust foundation for the nasal septum while lifting the tip, offering the flexibility to incorporate HA for final reshaping. The mantra of "Knowing The Best Tools" over "The Tool You Know Best" is fundamental in driving superior and safer outcomes in non-surgical rhinoplasties. Non-surgical rhinoplasties may seem like a quick and simple solution with hardly any downtime. There are two well-known non-surgical treatments for nose reshaping either with hyaluronic acid filler or with absorbable threads like PDO and a combination of both. Tailoring the treatment to each individual's unique nasal structure is crucial. Having worked with Caucasian and Asian/ethnic patients, I've learned that the best outcomes require a deep understanding of techniques and nasal anatomy. While HA filler is common and cannula is deemed safer, it may not always be the best choice.

Methods: Outlining various case studies focusing on using HA filler, needles, threads, and cannula to address nasal structures, skin morphology, and meet patients' expectations. Utilizing high G-Prime HA, PDO threads, Size 25G cannula, and sharp needles. Implementing multiple punctures with sharp needles, or 1 or 2 entry points approaches using the cannula for painless thread insertion.

Results: Utilizing PDO threads in ethnic nose cases, sometimes in conjunction with HA filler, has consistently produced excellent results without complications. Ethnic noses present challenges due to tight spaces between bones and skin and varying skin thickness. The use of solid materials like threads helps create a more stable foundation, effectively lifting the skin and enhancing the nasal septum compared to HA fillers. There will be case studies showing the usage of HA, Threads, and combinations of both in different cases to outline appropriate approaches for best outcomes.

Conclusions: Practically and technically, having a universal tool is crucial for achieving safer, satisfactory, and favorable outcomes.

Submitter
Tbarani O'shea Julia
drjuliah@likhaaesthetic.ie - Ireland

Presenter
Tbarani O'shea Julia
drjuliah@likhaaesthetic.ie - Ireland

#8710

New Revolutionary Nonsurgical Treatment for Hair Loss ~ Exosomes is The Real Deal.

51 - Regenerative aesthetics

Tbarani O'shea J

Background/Objectives: Exosomes are small extracellular vesicles that play a role in cell-to-cell communication. They contain high amounts of proteins, growth factors, and anti-inflammatory and immune modulators which have been studied for their potential therapeutic applications in various medical fields, including regenerative medicine. I'm thrilled to share my experiences and clinical cases whereby exosomes derived from rose stem cells are used and delivered with micro-needling techniques in the context of hair loss in my practice. Case studies are treated with exosome as a stand-alone treatment in different age groups, and sexes, with underlying inflammatory and autoimmune conditions.

Submitter
Agan Cyril Mitchel
cyril_agan@yahoo.com - Philippines

Presenter
Agan Cyril Mitchel
cyril_agan@yahoo.com -

#8715

The Snatched Lines – Cheekbone and Jawline Augmentation using Combination Injectables

45 - Combination treatments

Agan C

Background/Objectives: My work on drag queens involve highlighting facial features such as jawline and cheekbones. I took inspiration with this and started applying this to my patients and obtained a high satisfaction. The term “snatched” is a new slang term to describe someone who is flawlessly attractive. Originally used by drag queens to describe each other when the make-up, hair, dress, etc is fashionably perfect and on-point. Studying these snatched features has given me the idea that heavy contours of the mid and lower face are keys to amazing and dynamic looks of drag queens. This now can be applicable to any type of patients when looking at treatment strategies in injectable aesthetics. Two parallel lines running—the cheekbone and jawline can be defined and lifted to create balance and harmony for the whole face at the same time improving rejuvenation. As these are “regular” patients, the treatment has to be done in a natural and more subtle way. Injectables such as fillers, threads and toxins can be utilized, alone or in combination, to improve these features. Gender expression, cultural differences and patient preferences should be considered when designing the snatched lines.