ABSTRACT JOURNAL

ABSTRACTS of the
11TH 5-CENTINENT-CONGRESS
AUGUST 29 – SEPTEMBER 1, 2019
The meeting covers all aspects of medical dermatology, energy-based systems, injectable fillers, neurotoxins, as well as other facets of aesthetics – from peels to scars to photodynamic therapy. In addition, we have courses on the business of medicine – from social media to practice management and everything in between. In other words, there is something for everyone at the 5CC, and we are thrilled to be once again hosting the 2019 edition in the beautiful city of Barcelona, Spain.

In addition to many new programs and initiatives, we are pleased to release all of the abstracts that several of our wonderful SCC faculty have shared with us in this journal. Abstracts, which showcase the stories and talents of our esteemed faculty and guests from all over the globe.

We want this abstract journal to showcase aesthetic medicine – from all reaches of the globe, and in doing so we can share our incredible journeys with one another and share our love of dermatology and aesthetic medicine.

Planning and organizing an international congress is not easy and finding new ways to teach and explore the various facets of our business remains a challenge for everyone associated with meetings and congresses, no matter where they are from. The 5CC has achieved a global reach and that will always be one of our prime focuses – to have leading clinicians from all over the globe present cutting edge technology and science. We are pleased to announce that in 2019 we will have over 200 incredible dermatologists, plastic and facial plastic surgeons, and aesthetic experts from over 80 countries worldwide.

As we prepare for the 2019 edition of the SCC, we are confident that we have achieved our objectives, in striving to make each year better. There will be new educational developments, social activities, initiatives in learning, and informational technology to keep up with the changing pace and face of aesthetics around the globe.

Best regards

Michael H. Gold, MD
Congress President
KEEPING AN OPEN MIND SERIES: WHAT IS HOMEOPATHY AND CAN IT HELP MY AESTHETIC PRACTICE?

Lawrence Chukwudi Nwabudike • Romania

Complementary and alternative (CAM) medicine use is on the rise amongst patients. A number of therapies have become part of mainstream medicine. Homeopathy is met with skepticism by the medical establishment, as its principles appear to contradict modern mainstream medicine. This same reticence builds distrust between patients and their physicians, contributing to significant numbers of patients using homeopathy and CAM without informing their physicians.

In this course, held by 5CC Abstract Award winner 2018 LAWRENCE CHUKWUDI NWABUDIKE, the history, putative mechanisms of action, areas of use in dermatology and cosmesis will be explained. Finally, a few prescriptions that physicians can try for themselves will be offered.

At the end of the session, the physician should be knowledgeable of

- the principles of homeopathy,
- its mechanisms of action,
- possible areas of use

and will feel in a better position to hold meaningful dialogues with her/his patient, thus building better trust. Also, her/he may feel able to try some simple prescriptions, thereby enlarging the scope of therapies on offer in her/his practice.

FAKE NEWS

Dominique Du Crest • France

OBJECTIVES

Explain what can be the role of each doctor to debunk misinformation.

INTRODUCTION

Fake news is a type of propaganda that consists of deliberate disinformation or hoaxes spread via traditional print and broadcast news media or online social media. Although fake news makes headlines today, it is actually nothing new and has been present for centuries.

MATERIALS / METHOD

PubMed, web and social media searches using key words specific to the topic of this lecture.

RESULTS

Fake news has received fresh political attention since the last US presidential election, but all domains are subject to it. Healthcare is far from exempt and the situation today has even been referred to as “The Fake News Epidemic in Health”. On one hand it’s never been easier to get health information; on the other it’s never been so misleading. In this lecture, after reviewing the current threats and contributing factors, we will discuss countermeasures.

CONCLUSION

Doctors have decades of experience fighting fake news. Evidence-based medicine and the Peer Review process are tools that help to debunk misinformation, but nowadays evidence alone is not enough. Doctors are also needed on social media where they can have a unique role in educating the public, promoting good practice and pushing back misinformation. Efforts need to be part of a holistic movement.

I’VE GRADUATED… SO NOW WHAT…

Jay A. Shorr • USA

HOW TO PROPERLY NEGOTIATE YOUR EMPLOYEE AGREEMENT

Making the decision to venture out on your own can be the key to your future and stressful all at the same time. Knowing the proper steps to take and negotiating the terms and conditions of your new employee/associate/partnership agreement can make or break you.

This session will share the top steps you need to be aware of prior to accepting what is placed in front of you. We will list the top items you should be negotiating, and how you rank amongst your peers.

WHAT TO INCLUDE IN YOUR PRACTICE’S BUSINESS PLAN?

Every practice should have a mapped out plan for future growth. Whether you are opening a brand new practice (and the bank requires a pro forma or business plan) or you are projecting for the future, you must have a plan.
new, simple, approach to promote erectile rejuvenation has now been shown to be highly effective for vascular conditions. The mechanism of action is one of inducing micro-trauma, which stimulates cellular activity to achieve a specific clinical effect, so the actual clinical practice to achieve a very large number of highly effective treatment effects, from all of the many aspects of wound healing in both acute and chronic wounds of all aetiologies, in both soft and hard tissues, to the gamut of pain control in all its myriad facets. LED-LLLT can also be applied noninvasively to treat acne vulgaris and is proving really useful in managing other difficult-to-treat skin conditions, with light only or in combination with appropriate pharmaceutical agents.

Photobiomodulation, underpinning LED-LLLT, is real, and really works. Searching the term LLLT in PubMed will bring up over 5,700 hits. LED-LLLT for the clinician is here, and is here to stay – no hype, only hope!

Lasers and intense light sources (ILS) are subject to standards and regulatory controls because of the unique potential hazard they pose to tissues of the eye and skin, including the risk of blindness and skin burns. This talk reviews the progress of the new EC Medical Device Directive (MDD) and Regulations (MDR) first published in May 2017 which comprise requirements related to the safety and performance of medical devices and which replace the current Directive (93/42/EEC). Due for full implementation by May 2020, the MDR captures all of the major treatments such as hair and tattoo removal. A review will be provided of relevant recent standards and requirements for users of lasers and IPL.

This talk reviews the progress of the new EC Medical Device Directive (MDD) and Regulations (MDR) first published in May 2017 which comprise requirements related to the safety and performance of medical devices and which replace the current Directive (93/42/EEC). Due for full implementation by May 2020, the MDR captures all of the major treatments such as hair and tattoo removal. This talk reflects on likely impact on laser and ILS manufacturers and distributors and the effect on marketing of both professional devices and home-use light-based appliances to the general public.

A first draft of an Implementing Regulation on common specifications (CS) for devices without an intended medical purpose has been developed by European Commission COM service in collaboration with Member States and issued in February 2019 for public consultation and will be considered by MDCG subgroups before publication. The talk reflects on likely impact on laser and ILS manufacturers and distributors and the effect on marketing of both professional devices and home-use light-based appliances to the general public.

A review will be provided of relevant recent standards including particular requirements for consumer laser products and the development of educational standards and requirements for users of lasers and IPL.
Lasers in Dark Skin

Eduardo Weiss • USA

Cosmetic laser procedures in patients with mixed skin tone

ABSTRACT

Hispanics/Latinos are one of the fastest growing segment in the skin of color population in the United States. Utilization of lasers especially in people with skin of color requires a thorough understanding of laser physics and laser tissue interactions. In this article, we will outline the different lasers used in our practice based on the concept of selective photothermolysis and the various treatment parameters required for optimal safety and efficacy.

Defining Skin of Color

Defining skin of color in the Latino population can be particularly challenging as it encompasses several cultural and historical aspects. In general, skin of color identifies racial groups with darker skin hues other than that of white skin. The five racial categories defined by the US Census Bureau are American Indian or Alaska Native; Asian; Black; Native Hawaiian or Pacific Islander; and White. The Hispanic population is estimated to rise from 55 million in 2014 to 118 million in 2060, an increase of 115 percent. By 2060, 29 percent of the United States is projected to be Hispanic—more than one-quarter of the total population.[1] This increase in population becomes pertinent as it follows with an increase in demand by people with mixed color tones for dermatologic laser procedures. Most of the current medical literature on cosmetic laser procedures have been devoted to individuals with fair skin tones (skin phototypes < III). One study determined that the most common skin problems affecting this group are photoaging, facial melasma, hyperpigmentation, acne vulgaris, and eczema/contact dermatitis [2]. The Latino population runs the gamut of Fitzpatrick phototypes to experience post-inflammatory dyspigmentation, scarring. To ensure maximized heat delivery to the target chromophore and the least risk to surrounding tissue, the wavelength delivered in a pulse duration should be less than or equal to the thermal relaxation time (TRT) of the target, a principle known as selective photothermolysis.[4] There are several laser parameters that when taken in consideration can attenuate the risk of hyperpigmentation and scarring, especially in mixed color tones. These parameters include longer wavelengths, longer pulse duration, lower fluence, lower densities (MTZ/cm²), efficient cooling (pre, concurrent, post) and smaller spot size.

LASER SCIENCE

The main principle describing the use of laser therapy is the concept of the target chromophore (FIGURE 3). A chromophore is a substance which absorbs specific wavelengths depending on its absorption coefficient. The three main endogenous chromophores targeted in lasers procedures are melanin, hemoglobin, and water. Melanin and hemoglobin are major chromophores for visible & near-infrared light while water is a major chromophore for far-infrared spectrum. For tissue damage to ensue, a wavelength should be preferentially absorbed by the chromophore in the target tissue and not the surrounding tissue which may cause undesired effects (e.g. dyspigmentation, scarring). To ensure maximized heat delivery to the target chromophore and the least risk to surrounding tissue, the wavelength delivered in a pulse duration should be less than or equal to the thermal relaxation time (TRT) of the target, a principle known as selective photothermolysis.[4] There are several laser parameters that when taken in consideration can attenuate the risk of hyperpigmentation and scarring, especially in mixed color tones. These parameters include longer wavelengths, longer pulse duration, lower fluence, lower densities (MTZ/cm²), efficient cooling (pre, concurrent, post) and smaller spot size.

PULSED DYE LASER

The pulsed dye laser (PDL) is a treatment of choice for vascular lesions such as telangiectasias. The 585nm wavelength pulsed dye laser penetrates to a desired depth of approximately 1.2 millimeters (mm). The longer 595nm wavelength allows for a slightly deeper penetration; however, the absorption coefficient of oxyhemoglobin is 3 times higher at 585nm than 590nm. In our opinion, the 585nm pulsed dye laser is superior in treating the vascular lesions such as port wine stains. In addition, both wavelengths are suitable for lighter complexioned skin tones (phototype IV and lighter). For darker phototypes V and VI, longer wavelengths should be utilized for treatment of vascular lesions. In addition, longer pulse durations should be used as it is safer in darker-skinned individuals. Treatment recommendation for rosacea with telangiectasias include 515nm with pulse duration between 12-15, (millisecond) and 585nm with duration between 12-15ms.

LONG-PULSED DIODE LASER

(810nm)

The long-pulsed diode laser (810nm) is ideal for vascular lesions such as telangiectasias and overpenetrate the vascular lesions such as port wine stains. The 810nm wavelength diode laser is safer in darker-skinned individuals. Treatment recommendation for rosacea with telangiectasias include 515nm with pulse duration between 12-15, (millisecond) and 585nm with duration between 12-15ms.

INTENSE PULSED LIGHT

While there are many Intense Pulsed Light (IPL) devices available, the newer generation of IPL devices are as safe and effective as lasers in the management of skin conditions in darker skin tones. The patient’s skin phototype and skin condition will determine the choice of suitable cut-off filters and therefore the spectrum of wavelengths to be emitted. The same principles that apply to lasers to reduce the risk of hyperpigmentation after treatment are also true with IPL. FIGURE 4 depicts improvement of vascular and pigmented lesions using the IPL device.
Although there is no difference in the melanocyte density between Fitzpatrick phototypes, there is certainly an increase in the number and size of melanin granules within the basal layer keratinocytes in darker-skinned individuals. This large amount of melanin within the epidermis of darker skin types competitively absorbs laser light targeted for other chromophores. Subsequently, with the broad absorption spectrum of melanin, ranging from 250 to 1200 nm, greater care and diligence must be taken when using lasers on Latino skin. A selective window for targeting melanin lies between 630 and 1100 nanometers (nm), where there is desired skin penetration and preferential absorption of melanin over oxyhaemoglobin. Absorption for melanin decreases as the wavelength increases, but a longer wavelength allows deeper skin penetration. Shorter wavelengths (<600 nm) damage pigmented cells with lower energy fluences, while longer wavelengths (>600 nm) penetrate deeper but need more energy to cause melanosome damage. A longer pulse duration delivers a greater amount of laser energy per area. As previously discussed, a pulse duration less than the TRT will decrease risk of damage to the melanosome.

HAIR REMOVAL

With the advent of lasers with longer wavelengths, longer pulse durations, and efficient cooling devices, all skin types can be treated with lasers for hair removal with reduced risk of adverse outcomes. Caution must be taken when performing laser treatments in patients with a tan, in fact, it should be avoided to prevent adverse effects as seen in FIGURE 5. As the provider, it is important to ensure that the handpiece is perpendicular to the skin surface and to avoid overlapping during pulses. It is also essential to confirm the cooling device to functioning as seen in FIGURE 5. As the provider, it is important to counsel patients that treatment does not cure their melanosome. We generally turn to a laser when the case is resistant to more conservative treatment, which includes topical skin lighteners including Kligman’s formula, and/or light peels, or oral tranexamic acid. In general lasers have revolutionized the treatment of dermatological disorders but its place in the management of melasma and post-inflammatory hyperpigmentation (PHI) is still controversial. The Q5 Nd:YAG is the most widely used laser for the treatment of melasma. Our parameter recommendation includes fluence less than 5 Joules/cm², spot size 6 mm, and frequency of 10 Hz. Heat can exacerbate melasma, therefore a single pass should be performed on each area to be treated prior to additional passes. Specifically, up to three passes are performed, allowing the tissue to properly cool between passes. The tuning procedure will utilize low fluence with a large spot size. The number of treatment sessions varies from 5 to 10 at 1-week intervals. Rebound hyperpigmentation could be due to the multiple sub threshold exposures that can stimulate melanogenesis in some areas, and/or inflammation with secondary PHI. Monthly or quarterly maintenance is performed to maintain results. The use of pulsed dye laser (PDL) for the treatment of melasma is based on the theory that skin vascularization plays an important role in the pathogenesis of melasma. Particularly, it is known that melanocytes express vascular endothelial growth factor receptors which cause the telangiectasias. TABLE 2 outlines the lasers we use to treat melasma. FIGURE 6 depicts a Latina patient treated with two sessions with the Picosecond 1064nm laser two weeks apart.

MELASMA

Melasma treatment is one of the most difficult and frustrating conditions to manage and unfortunately a very common condition among Latinos. The origin of hyperpigmentation can be epidermal, dermal, junctional, or a combination. A wood’s lamp can be used to determine the depth. Given melasma has a hormonal component and is essentially caused by ultraviolet light exposure, it is expected to almost always return after treating. It is important to counsel patients that treatment does not cure their melasma. The treatment sessions vary from 2 to 6 at an interval of 1-4 weeks.

TABLE 2

<table>
<thead>
<tr>
<th>LASERS RECOMMENDATIONS FOR MELASMA</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPL 570-580nm</td>
</tr>
<tr>
<td>Low fluence, internal and external cooling, long pulse duration (6-8 j/cm²-15ms)</td>
</tr>
<tr>
<td>Fraxel 1550nm</td>
</tr>
<tr>
<td>Low fluence, few passes, more sessions</td>
</tr>
<tr>
<td>The density used varies from 2000 to 2500 MT2/cm² and energy levels 6 to 10mJ/nm. The treatment sessions vary from 2 to 6 at an interval of 1-4 weeks</td>
</tr>
<tr>
<td>Abalve pixelated Er:YAG 2940nm</td>
</tr>
<tr>
<td>Affirm MFX Dual Fractional Laser 1320/1440nm</td>
</tr>
<tr>
<td>Picosecond 1064nm Laser</td>
</tr>
</tbody>
</table>

FIGURE 6

CHROMOPHORE: WATER

Water is the targeted chromophore in most resurfacing procedures. Abalve resurfacing creates a controlled partial-thickness damage down to the dermis, therefore use in phototypes V and VI is usually not indicated due to the risk of dyspigmentation and scarring. The emergence of the nonablative resurfacing lasers has allowed people of darker skin tones an opportunity to treat pigmented skin condition, rhylades as well as skin texture with less risk of side effects. Fractional or pixelated resurfacing is another safe nonablative device that can be used for resurfacing in people with skin of color. We outline the lasers we use in our practice for resurfacing in TABLE 3.

TABLE 3

RESURFACING LASERS THAT TARGET WATER

<table>
<thead>
<tr>
<th>Fractional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fractionated 1550-nm erbium doped fiber laser</td>
</tr>
<tr>
<td>Nonablative</td>
</tr>
<tr>
<td>Nd:YAG 1064 nm</td>
</tr>
<tr>
<td>Ablative</td>
</tr>
<tr>
<td>CO2 10,600 nm</td>
</tr>
</tbody>
</table>

SKIN REJUVENATION

Traditionally, ablative lasers, such as the carbon dioxide (CO2) and Erbium:YAG have been the gold standard in rejuvenation but can cause several unwanted side effects in Latino skin. Specifically, it has been described to cause hyperpigmentation in 31% of all skin types increasing to 50% in type II Fitzpatrick skin phototypes. In addition, there can be a delayed onset of hypopigmentation and transient erythema lasting months. The increased adverse effects may result from lower levels of melanin in skin of color making pre-treatment and patient selection important in order to reduce these outcomes. Some more appropriate treatment alternatives for darker skin types include non-ablative infrared, micro needling, and radiofrequency devices.

The newer category of micro-ablative resurfacing lasers (fractional CO2, fractional Erbium, and the 2700nm Yttrium Scandium Gallium Garnet (YSGG), offers a safer modality with which to treat Fitzpatrick skin type V and above. Compared to the older generation resurfacing lasers the micro-ablative lasers minimize the amount and duration of erythema and edema which can last just three to four days. A recent retrospective study of Chinese patients treated with a 1,550nm erbium-doped fractional laser (Fraxel 1550, Salta Medical) found that using fewer passes per treatment, but increasing the total number of treatments was associated with a lower risk of post-inflammatory hyperpigmentation without compromising efficacy.

MANAGEMENT OF COMPLICATIONS

One of the most common malpractice lawsuits is laser complications. It is important to ensure that all laser practitioners are certified and that providers have reviewed laser laws their state. Pre and post-treatment photos are essential. It is also important to document settings and informed consent. If an issue arises, the provider should make themselves available 24/7 and prepare for a lot of hand-holding. The best treatment for complications is prevention. TABLE 4 outlines acute and chronic complication management that we practice in our office.
TABLE 4

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACUTE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Superficial erosions/bullae</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Clean with a mild soap</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Silver sulfadiazine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infectious (bacterial and viral)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Treat accordingly with antibacterial or antivirals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Erythema/Pruritus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Control inflammation with a short pulse of a potent topical corticosteroid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Intralesional 5FU/Kenalog</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CHRONIC</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pigmentation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Hyperpigmentation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Hydroquinone 8-10% cream</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Lasers: IPL or q5sNd:YAG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Sunscreen, SPF60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Hypopigmentation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Moisturization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Latisse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Sun exposure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Scarring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Short pulses of potent topical steroid, Intralesional 5FU/Kenalog</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Fractionated Er:YAG or CO₂</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• PDL and IPL at 515nm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CONCLUSION

The use of lasers in people with skin of color requires an understanding of laser physics and laser tissue interactions. It is very important to be familiar with the laser device as not all energy-based devices work similarly. The Latino population encompasses the range of all phototypes and therefore one rule cannot apply to all Latinos. Proper selection of device, wavelength, and treatment parameters are essential for safety and efficacy. In addition, pre- and post-treatment protocols are pivotal in the prevention of dyspigmentation and scarring.

REFERENCES

**SCIENTIFIC SESSIONS**

**3 PLANES OF MIMIC MUSCLES PREREQUISITE FOR FACIAL INJECTIONS**
Roger E. Amar • Spain

To learn the origin and insertion of the 16 muscles in a half face is becoming mandatory to the doctors who wants to improve their skills in Botox and filler injections. To make faces of the skull. The Middle plane for smile and speech.  

As long as it is a matter of enumerating the facial muscles this way to classify the 30 mimic muscles may be acceptable, but when it comes to injecting these muscles, an anatomical expertise is necessary to avoid the destruction of different muscles in different planes. Therefore, in the early 2000 years, after dissection of the muscles according to their functions, the facial expressions were learned to improve their skills in Botox and filler injections.

**THE MIDDLE PLANE WITH 7 MUSCLES HAS A CONVENTIONAL COLOUR IN GREEN:**
1. **ZYGMATICS MAJOR**
2. **LEVATOR LABII ALAQUE NASI**
3. **LEVATOR LABII SUPERIORIS**
4. **DEPRESSOR LABII INFERIORIS**
5. **ORBICULARIS Oris**
6. **RISORIUS**
7. **PLATYPSMA**

The face is typically divided into six layers. Moving from superficial to deep, these include the skin, superficial fat compartments, SMAS, superficial facial muscles, deep fascia and deep fat compartments, and the retaining ligaments that anchor the overlying structures to the periosteum of the facial bones. Classically the mimic muscles are organized into six groups based on their common insertion sites as the upper and lower lips, at the nose, at the two orbits and at the scalp.

**THE SUPERFICIAL PLANE WITH 5 MUSCLES HAS A CONVENTIONAL COLOUR IN BLUE:**
1. **FRONTALIS**
2. **PROPERUS**
3. **ORBICULARIS OCULI**
4. **ZYGMATICS MINOR**
5. **DEPRESSOR ANGULI ORIS**

To make these planes easy to memorize, we have painted the muscles in their conventional colour on the white face of a MME. It became easier to remember the muscles responsible for each facial expression.  

**ANATOMY TO AVOID TOXIN TREATMENT COMPLICATIONS**
Hughes Cartier • France

The use of botulin toxin is so simple. Nonetheless, it is also simple to obtain a bad result in the upper face as in the lower face, which is area more complex. The anatomy of the face is complex, as the muscles are very close together and interface at different levels and depths to perform heterogeneous functions with antagonist function.

**BACKGROUND**

The anatomy of the face is complex, as the muscles are very close together and interface at different levels and depths to perform heterogeneous functions with antagonist function.

**METHODS**

Based on the anatomical knowledge of each muscle of the face provides recommendations and guidelines to perform botulin toxin injection safely. The review of each muscle with its relevant anatomy and relationship of this three-dimensional anatomy with the cutaneous plane gives as possible the exact position of injectable locations.

**CONCLUSION**

Static anatomy is a preamble to the injection, but the facial expression in life is necessary to avoid complications.

**THE DEEP PLANE WITH 4 MUSCLES HAS A CONVENTIONAL COLOUR IN RED:**
1. **CORRUGATOR**
2. **LEVATOR ANGULI ORIS**
3. **BUCINATOR**
4. **MENTALIS**

**NON-BILOGIC SYSTEMICS FOR PSORIASIS**
Thomas Drsichka • Germany

Psoriasis represents a chronic, immune mediated systemic disease characterized by erythematous, inflammatory pruritic plaques of the skin. Several pro-inflammatory cytokines serve as inflammatory drivers of skin and systemic inflammation leading not only to skin plaques but also to comorbidities.  

Systemic disease requires systemic treatment approaches. Current treatment algorithms on psoriasis very much focus on administration of biologics which directly interfere with pathogenetic inflammatory cytokines.

**APART FROM BILOGICS THERE ARE NON-BILOGIC SYSTEMIC TREATMENTS APPROVED FOR CHRONIC PLAQUE PSORIASIS:**

Methotrexate has been used for plaque psoriasis since the 1960s. At a dose of 17.5mg qwk a PASI 75 can be reached in 51% of patients. PASI 90 can be achieved in 29% of patients at good safety profile.

Cyclosporine is characterized by rapid onset of action during the induction phase of treatment. Toxicity (e.g. kidney, blood pressure elevation) impacts its long-term use. Fumaric acid derivatives have been used in Germany since the 1990s. In 2017 dimethyl fumarate has been approved for plaque psoriasis by the EMA. Relatively slow onset of action, flushing and gastrointestinal adverse events are characteristics of this class of drugs. Efficacy with regard to PASI 75 is higher than methotrexate but lower than biologics.

Apremilast is an oral anti-psoriatic medication with a high safety profile. Lab tests are not required before and during treatment. Efficacy is lower than in the aforementioned drug classes, however, nail psoriasis has been shown to be targeted effectively.

Actretin is approved for psoriasis, however, apart from pustular forms of psoriasis it does not play a major role in the systemic treatment armamentarium any more.

**RESULTS**

Following our studies after a 12-session cure, clinical pregnancy rates after IVF in an obese infertile population of 65.55% has been observed and CT scans showed an average decrease in the visceral fat of 8.2% and to a lesser extent a decrease of subcutaneous fat of 4.1%.  

**CONCLUSIONS**

Facing an alarming increase in overweight and obesity and considering the current therapeutic gear offering various results, it seems interesting to focus on health benefits of BioMagnetic field, also called BioStimology. The clinical studies demonstrated a positive impact on oogenesis that might be in certain circumstances an answer to overweight-related infertility issues and a positive effect on metabolic syndrome, weight loss, visceral fat and waistline reduction of overweight or obese individuals. The clinical studies demonstrated the safety and efficiency of the devices.
CryoLipolysis and Combinations: New Ways for Effective and Safe Fat Reduction
Klaus Fritz • Germany

Due to its high efficiency and safety various technologies of heating biological tissue are broadly practiced in the dermatological field for various aesthetic applications, including skin tightening, skin lifting, body contouring and cellulite reduction. In body contouring radiofrequency, Lasers and High intensity ultrasound play an increasing role in heating the dermis.

Both – ultrasound and RF are used as a single technology or in combinations in order to achieve sufficient heating of the dermis. Based on the simultaneous delivery of monopolar RF and ultrasound energy through a single handpiece the monopolar RF reduces fat cells. The applicator tip is continuously cooled throughout the treatment to protect the skin and permits effective heating of the subdermal fat layers. Re-shaping and volume reduction are achieved through targeted energy absorption and subsequent initiation of lipolytic processes and collagen remodeling. This is improved by combining shock waves simultaneously. Studies show better result for combined procedures.

Since three years new system was launched using RF for a whole abdomen Radiofrequency for circumference reduction and a RF monopolar system delivered by a tip that applies shock waves simultaneously, a new method especially for cellulite treatment and smoothing of the skin.

These new technologies allow better tightening than lasers and have enlarged the portfolio of available procedures in aesthetic medicine.

HIFEM technology has recently become a widely discussed tool used in body contouring due to its dual effect on muscle and fat. Yet its mechanism is still often confused with radiofrequency, electrical muscle stimulation and other established body contouring modalities. Although HIFEM directly stimulates muscle it has also been found to affect subcutaneous fat. The aim of this lecture is to elucidate how, according to available literature, HIFEM induces intensive muscle contractions and triggers a metabolic response in fat. Further, the differentiation of HIFEM technology from other body contouring modalities will be outlined. HIFEM technology uses a wound coil to induce an electrical field in the underlying tissue, where it depolarizes motor neurons and thus causes muscle contraction. Using a high pulse frequency, the muscle is contracted to levels not achievable voluntarily, triggering hypertrophic effect in the muscle and metabolic responses in fat in order to supply energy to the muscle. The hypothesis of stress reaction leading to breakdown of fat cells will be explored. The presented hypothesis is supported by the publicly available studies, but more work is needed to completely understand the role of HIFEM in fat reduction.

Cryolipolysis with Phosphatidylcholine and Deoxycholate
Sylvie Lederlé • France

Chemical Adipolysis

Since the development of liposuction, there have been successive attempts to develop treatments to reduce localized adipose tissue deposits. Lipolysis is a technique of dissolving stored fat, using Phosphatidylcholine (PPC) in association with Deoxycholate (DOC) in order to achieve a sculpting effect by non-surgical means. It can only be used on small fat deposits.

Mode of Action
DOC together with PPC activates lipases inducing membrane breakdown. The released lipid particles are emulsified, dissolved, and transported by high-density lipoproteins (HDL) to the liver.

Indications
Any localization where fat can be pinched between two fingers. On the Body mainly abdominal fat, but also hips, inner thigh, knees, inner arms, lower part of the buttocks. On the face mainly double chin, but also lower part of the cheeks and face contour...

Treatment modalities
Injections must be performed in the fat layer, below 5 mm and up to 15 mm below the skin, depending on the thickness of the fat deposit. A grid pattern from 1-1.5 cm between the injection points is recommended. PPC acts over the course of more than 8 weeks, which means that there should be a two-month interval between sessions on the same area.

Post-operative outcome
Edema along with mild pain and redness, lasting from 1-4 days and bruises are common. Paresthesia, small temporary nodules, and site infections have been reported.

Side effects
Cases of necrosis have been seen due to injections being performed too superficially. With higher quantities than recommended, nausea, diarrhea, light-headedness, and headaches have been reported. No signs of inflammation, or any change has been detected in blood work post treatment, such as increased glycerina, cholesterol, or lipid values.

Conclusion
Lipolysis associating PPC and DOC is a very efficient treatment for small fat deposits with very moderate side effects. Good complimentary method to liposuction or cryolipolysis.

Body Filler and More: Best Combinations
Sorina Sattler • Germany

After the unucky era of the first body fillers, mostly for the aim of breast augmentation, has calmed down, body filling specially with hyaluronic fillers, seemed to become unpopular. In our patients the need of filling and shaping in different body areas is unbroken. There are only a few filling substances available beside autologous fat. In some countries body hyaluronic acid fillers are available again.

Despite this fact the aim of our patient for body treat- ments is raising. The body has become the second face and patients are aiming for the same young appearance on the body as on the face. Beside the breast augmentation with a filling agent, the gluteal area, the genitalia, like Labia Majora are common areas for body filling. Body fillers also help after an unlucky outcome of liposuction or body contouring surgery with irregularities, mostly included in a combina- tion therapy.

A new era has started in body skin aesthetics, with well-known skin rejuvenating principles, like Collagen and Hyaluronic acid fillers. First results are very promising. Here the use of collagen stimulants on the body skin together with energy-based devices seem to potentiate the tightening effect and are an option for the treatment of body skin elastics and maybe even cellulite. First investigations will be presen- ted in this lecture.

Non-Surgical Skin Tightening
Zamira Yanine • Colombia

Minimal and non-invasive skin tightening procedures for the face and the neck are highly desired among aging patients, as sagging skin accompanies the aging process almost in a universal manner. Outside of neurotoxins and fillers, skin tightening is one of the most sought-after cosmetic noninvasive treatments, espe- cially for women, at any age. Patients want tighter and smoother skin without having to go through big surgeries or long recoveries, and seek non-invasive treatments to obtain a natural skin tightening. When to consider non- surgical skin tightening? Patients with mild to moderate loose skin and laxity, who want improvement in the qua-
SKIN MICROBIOME AND AGING
Andre Berger • USA

This presentation will address how skin microbiota are commonly involved in dermatologic conditions that impact patients’ appearance and aging and to understand conditions, both external and internal, in which the skin microbiota become disrupted. Attendees will learn how to use an integrative approach to modulate the skin microbiota composition to restore host-microbiota homeostasis and address aesthetic and aging concerns of the skin.

MEDICAL PROPHYLAXIS TREATMENT AND TISSUE REENGINEERING: TWO EMERGING FORMATS
Dirk-Harald Gröne • Germany

Practice management is an ongoing process which requires continuous efforts. Just as the healthcare industry has embraced the concept of regenerative medicine and the innate potential of the human body to heal wounds and rebuild damaged tissue, physicians are working on ways to apply this concept to the development of evidence-based applications centered on cell restoration, tissue replacement or rejuvenation for anti-aging purposes. This new medical landscape in lifestyle medicine offers patients potential breakthrough therapies allowing patients to rely on their own biologies to maintain a youthful natural look and live and feel better – even during turbulent times, hospitalization or chronic diseases. Dermatologists and plastic surgeons are the main players in the business. Nonetheless, addressing these new minimal invasive therapies to the patient and arousing interest for rejuvenation therapies poses quite a challenge.

In this talk, I will present and discuss 2 emerging formats, which, to my understanding, facilitate the implementation of regenerative medicine into the practice setting, smartly introducing the philosophy of “natural” anti-aging, early skin cancer detection and treatment to the outdoor patient.

THE MEDICAL PROPHYLAXIS FORMAT

BACKGROUND

Medical prophylaxis in dermatology can lead to improved disease control, delayed surgery, and decreased costs. The benefits of this approach are well-documented in the literature, but barriers to implementation remain.

INTENTION

Early use of the medical and cosmetic potential of Daylight PDT and LLLT’s against signs of ageing and actinic skin damage in a favorable cosmetic setting. This should be regarded as a first step of regenerative medicine and skin cancer prevention.

CONCEPT

We adopted the format used in dental prophylaxis which is widely accepted as a non-physician therapy and applied this format to dermatology. The tasks and procedures performed by the dental hygienist are clearly defined. The patient is aware of the advantages a) for better cleansing, b) polishing, c) reversing inflammation, d) maintenance and supervision of ongoing therapies, e) recalls for post-procedure documentation and medical appointments.

THE PROCESS OF MEDICAL PROPHYLAXIS IN DERMATOLOGY

Inspection with a standardized imaging procedure

Manual cleaning and removal of cosmetic residues with Sonic Skin brush

Microdermabrasion against impurities, deposits and dilated pores

Connective tissue massage and manual lymph drainage with air pressure and ultrasound

Non-ablative laser for conditioning the application of photosensitizers

Light protection consultation and information on the implementation of the Day light PDT (Amelez and Luxem)

Process coaching

THE FORMAT OF INTIMATE TISSUE PHYSIOTHERAPY

BACKGROUND

Every 3rd woman in the age of 40+ suffers from intimate symptoms, urogenital incontinence, laxity, and increased incidence of vulvar atrophy and irritative genitourinary symptoms. Not all women feel confident with local therapies, Kegel, Biofeedback and pelvic exercises prescribed by their urogynecologist though those physical therapies are widely accepted to help the patients by a) exercise, b) electric muscle stimulation c) biofeedback and supervision. Early preventive laser, EBD and regenerative treatments may delay surgeries and raise awareness for comorbidities, maintenance therapies and self-care power (Valadarez A 2019).

INTENTION

Introduce female rejuvenation with Lasers and EBD to the patients, changing the attitude of those patients to patient and physician staff.

CONCEPT

We adopted the routine of pelvic physiotherapy which is widely accepted by the patients to a laser assisted and device dependent dermatologic Physiotherapy. The tasks and procedures performed are clearly defined.

SUMMARIZE AND ADVANTAGES OF BOTH FORMATS

- Standardized pre- and post-treatment by non-physician staff
- Introduction of the patient to further medical measures, some of which are also necessary from a surgical point of view
- Scientific information and cross marketing on tumor surgery, laser assisted PDT, Botox, filler, skin resurfacing, myoma surgery, liposuction, fat grafting, cell transfer and other rejuvenation techniques.
- Double appointments with doctor for diagnostics and a “pleasant” cosmetic therapy
- Pretense to medical standards of non-medical services under medical guidance and setting them apart from lay cosmetics
- Connection and adherence through direct contacts, social media and recall
- Billing via GOÄ (German Medical Fee Scale)
- Supervision by a medical specialist
- Uncovering communication gaps and patient sensitivities
- Maintenance and post procedure services for excellent results

CONCLUSION

Laser, EBD and LED’s are energy-based physical therapies with a high regenerative potential. The painless implementation and usually a rapid success lead to a high popularity among patients, especially for wound treat-
ment after surgical interventions or in addition to other therapies. This applies without restriction to both facial and body treatments. Our 2 formats are an offer to the patient to “get an idea” of these treatments. Often the patient is not ready for invasive therapies and favors a physician’s independent position to initiate the consultation and to address intimate symptoms. The success of this new concept is strongly dependent on practice management, patient flow and the attitude of the staff towards an interdisciplinary setting and trustful relation between the patient and the responsible doctor.

**Algorithm of Aesthetic Evaluation of the Face**

Natalia Kalashnikova • Russia

**Background**

The aging process is complex and multilayer, affecting all tissues of the face. Therefore, the use of a combined approach in aesthetic correction is more reasonable and effective. The combination of aesthetic interventions should be individual for each patient and based on a thorough preliminary assessment of the face. Currently, there are no accepted clinical guidelines for aesthetic facial assessment.

**Purpose**

Develop clinical recommendations for a thorough aesthetic assessment of the face, including constitutional factors and age-related changes of multiple layers of the face.

**Material and Methods**

Evaluation of previous and current used assessment scales of aging and constitutional factors by doctors of various specialties: dermatologists, plastic surgeons, dentists and neurologists. Selections of parameters affecting to the aesthetic status of the patient and their accumulation in a single algorithm.

**Results**

Conclusion of thorough assessment of the face is a set of constitutional parameters (geometric proportions and anatomical-morphological factors) and the available age-related changes multiple layers of the face.

**Conclusions**

A standardized approach to the thorough assessment of the face improves its quality and allows to make a reasonable individual treatment plan, more to evaluate the effectiveness of the correction by the dynamics of parameter values before and after treatment.

**BiO hacking as an Integral Part of Modern Aesthetic Medicine**

Elena Molokova • Russia

For a long time, the offer on the market was limited to grooming procedures, simple manipulations in the doctor’s office such as cleansing, facials, massages, and customer needs were simply driven into buying the best cream that would solve all the problems at once. We call this aesthetic medicine 1.0.

With the development of technology the era of aesthetic medicine 2.0 has come when all kinds of tools and injection procedures appeared in the arsenal of aesthetic medicine physician that could successfully fix the external level of problems, and clients began to ask to get “injection of youth” and to make their visits to a specialist as less frequent as possible.

However, things have changed nowadays, the approach of solving aesthetic problems is different as well as the needs of the modern patient. Customers want to be healthy to prevent age-related changes not only on the external level but also on the internal one.

The value of health and youth for a modern person is a necessary condition for the quality of life and a resource for adapting to changes and development. It can be observed only in a complex and at all levels: structure, biochemistry, thoughts, and emotions.

Biohacking as a phenomenon is an integrated approach for preventing, controlling and combating age-related changes in order to improve the quality of life and prolong active longevity. An integrated approach reflects the concept of 5Ps medicine: personalization, predictability, prevention, precision, participation.

To fulfill all these conditions dominated by modern needs and technologies we use in our work:

- Genetic testing which allows you to identify a predisposition to certain diseases as well as to predict possible complications.
- Transdermal epigenetic anti-aging therapy that can affect the functioning of a gene without changes in the nucleotide sequence of the DNA. It is aimed to regulate metabolic processes in the body to be able to cope with late acne, dry skin at all levels of the skin, restore the barrier and moisture-saving function of the skin, correct degenerative changes in the dermis, eliminate oxidative stress, inflammation, regulate blood-lymphatic circulation, lymph-salivation, adjust work neuro-vascular dysfunctions, remove metabolic products from the intercellular space, adjust cellular communications.
- Detox programs, stress management, normalization of the bowels, metabolic processes, nutritional, work with somatic problems.
- Dietology, aimed at the preparation of individual nutrition programs, taking into account the dysfunctions of the body.
- Communication technologies to build the doctor-patient relationships, engage them into the treatment process and establish long-term follow-up.

But we also need to be aware of the phenomenon of pseudo-biohacking with the uncontrolled intake of vitamins, dietary supplements, frequent check-ups and other unreasonable procedures that lead to psychosis rather than health.

**Complementary Medicine in Dermatology: Another Approach to Cosmesis**

Lawrence Chukwudi Nwabudike • Romania

in contemplating cosmetic dermatology surgery and lasers come to mind. A major component of skin disease is its aesthetic aspect. Many skin disorders lead to reduced quality of life. This diminished quality of life is often associated with the aesthetic aspect of these dermatoses.

Recent evidence points to the role of nutrition, exercise, mind–body interventions, homeopathy, acupuncture and herbs in the therapy of skin disease. Their use is gaining popularity, meaning there is a growing market for such products and services. Yet the physician’s primary task is to do no harm.

An understanding of these methods, together with a compassionate view, which also helps patients understand their disease and therefore cope with it, reducing the demand for unnecessary – expensive – interventions may be a future direction to cosmetic medicine. This would fit the injunction to “first do no harm”.

**Regenerative Medicine: Facts and Fictions Growth Factors: Harnessing Healing Power From Restoration to Rejuvenation**

Ahmed Al-Qahtani • USA

Since the Nobel Prize-winning discovery of nerve growth factor (NGF) and epidermal growth factor (EGF) in 1986, scientists and physicians alike have sought to understand and apply the physiological benefits of growth factors. In both healing and rejuvenation, tissue remodeling and systemic restoration, strides have been made in this regard. While the activity of growth factors and other elements of the cell secretome in response to acute wound damage are becoming increasingly well known, it remains a novelty to many that similar principles of restoration and remodeling repair can be employed for the sake of cosmeceutical rejuvenation. Within this domain, topical serums containing an intricate balance of growth factors, cytokines and other peptides have proven effective in reversing the signs of extrinsic aging. Those engineered peptides are now patented (U.S. Pat. 8,518,819).

This study corroborates the idea that the topical application of growth factors and cytokines is beneficial in reducing the signs of skin aging of the face, including the area around the eyes. Moreover, growth factors have been shown to restore hair growth and slow down the progression of Androgenetic alopecia. Our study established the effectiveness of naturally occurring growth factors for anti-aging, skin rejuvenation, wound healing and for the first time in the treatment of hair loss.

**Home-Use Devices: The Challenge of Mass Market Acceptance**

David Bean • USA

Dozens of home-based medical devices are CE certified and FDA-declared for over-the-counter sale to the general public. Yet, no medical device has achieved mass-market acceptance. Many other industries have seen equipment transition from professional use to mass-market consumer acceptance. This presentation will analyze the key factors required to transition a product from professional use to consumer mass-market acceptance. Next, the presentation will ap-
we purchase.

FACIAL RESHAPING
FILLERS – SCIENCE & NON-SURGICAL

Ekaterina Gutop • Russia

Non-surgical lifting with fillers based on characteris-
tics of ligaments to create the support for soft tis-
ues. Peculiarities of zygomatic, mandibular, platysma-au-
ricular and orbicularis retaining ligament 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. Analyzing ligaments like a system when has
effect on one part of this system leading to the division
for the others the best aesthetic result by the treatment
can be obtained.

Using cannula or needle is at the prerogative of the
doctor. By this strategy of the treatment effect of the non-surgi-
cal lifting with visible natural result can be achieved.

WHAT’S WHAT IN ROSACEA?
Thomas Dirschka • Germany

Rosacea is a chronic inflammatory facial disease
characterized by a variety of clinical signs and sym-
ptoms including erythema, inflammatory lesions and
phymata. Ocular symptoms can accompany facial sym-
ptoms or ever occur as mono-symptomatic ocular ro-
sacea.

THE DIVERSITY OF THE CLINICAL REPRESENTATION
OF ROSACEA REQUIRES AN ADAPTED TREATMENT
APPROACH TARGETING DIFFERENT PATHOGENETIC
DRIVERS

Ivermectin 1% cream has demonstrated high efficacy
in inflammatory rosacea lesions with superior efficacy
compared to topical metronidazole. Brimonidine 0.33%
gel is approved for erythematous rosacea. Concomitant
use of ivermectin 1% cream and brimonidine 0.33% gel
also demonstrated superior efficacy over topical me-
tronidazole and azelaic acid regarding erythema and in-
flammatory lesions.

Combination of ivermectin 1% cream and doxycycline
40mg modified-release capsules demonstrated to lead
to fast responses, improve response rate and increase
patient satisfaction in severe rosacea compared to iver-
mectin 1% creme alone.

CONCLUSIONS

Combination treatments in rosacea involving ivermecti-
ne 1% cream, doxycycline 40mg modified-release cap-
sules and brimonidine 0.33% gel offer symptom-adap-
ted approaches to treat rosacea.

WHAT’S NEW IN TOPICAL
AND ORAL ACNE MEDICINES?
Thomas Dirschka • Germany

Acne vulgaris represents one of the most common
skin diseases worldwide. Treatment is still a chal-
lenge due to high chronicity, a variable, unpredictable
course of disease, frequent relapses, and unwanted side
effects of available treatment options. Antibiotic use is
most likely to decline as concerns about resistance plays
an increasing role.

Better understanding of acne pathophysiology has brought
up some new treatment options
Topical triflаратome cream represents a novel topical reti-
noide in moderate facial and truncal acne. In two-phase III
double blind, randomized, vehicle-controlled studies of
once-daily triflаратome cream versus vehicle in subjects
aged nine years or older, it showed significant reduction
in inflammatory and noninflammatory lesion counts in fa-
vor of triflаратome when compared with the vehicle.
Inter-
estingly, triflаратome cream represents the first acne topi-
cal that has been studied in truncal acne. Apart from new
topical retinoids photodynamic therapy (PDT) and use
of different light sources have been published for acne.
ALA-PDT has demonstrated efficacy in moderately se-
vere inflammatory acne. Over-the counter light therapy
for acne has emerged as another potential treatment
option and induced strong public interest. However, only
a limited number of clinical trials have been published to
better understand mode of action of such light devices.

CONCLUSIONS

After many years of standstill in new acne treatments
new substances have been approved and need to be
integrated in adapted treatment algorithms.

DERMOCOSMETICS FOR ACNE AND ROSACEA
Vanessa Piquero-Casals • Spain

Acne and Rosacea are affected by the inappropriate
use of DermoCosmetics.

Dermocosmetics are part of the treatment; especially in
the maintenance of Acne and Rosacea erythematosa.
At this explanation, we will talk about cleansing, toning
and thermal water, sunscreens, camouflage, makeup,
emollients and moisturizers, mask, serums, domiciliary
peels, and active ingredients used in both problems and
how to guide our patients about it.

The Dermocosmetics should evolve with the Dermato-
logist. Likewise, to differentiate when we can manage
these pathologies only with DermoCosmetics and when
we must associate more or less strong medications ac-
cording to the case.
Lasers & EBDS – The Sky is the Limit!

Combination of EBDS for Skin Texture and Scars
Lehavit Akerman • Israel

A split case comparison of body hair removal with a large spot, three wavelength diode versus a small spot, single wavelength diode.

Hair removal laser technology has been clinically established over the past few decades. 755nm, 810nm & 1064nm wavelengths comprise the majority of hair removal device technology in use today. However, there is still a growing demand for reduced procedure time and improved coverage without sacrificing safety and effectiveness for all skin types.

We conducted a study which included 12 patients (ages 23-45yr), skin type I-IV, comparing a new combined diode wavelength (755-810-1064nm) technology (Large spot size =2cm²) with a single 810nm wavelength diode (spot size =2cm²). Treatment included 4 sessions with 6 weeks intervals, targeting various treatment areas (back, abdomen or legs). Treatment area was divided equally and treated with either the combined three wavelengths (755-810-1064nm) large spot size (Soprano Titanium, Alma Lasers, Israel) or with a single wavelength (810nm) small spot size (Soprano Ice, Alma Lasers, Israel). Hair reduction efficacy was evaluated by visual scoring of three independent evaluators.

The aim of this study was to evaluate procedure time and coverage improvement of the newly introduced technology while maintaining safety and efficacy standards.

Mechano-Thermal Assisted Drug Delivery for Various Different Dermatological and Aesthetic Indications
Ofir Arza • Israel

Topical therapeutics demonstrate poor total absorption and cutaneous bioavailability, with only 1-5% being absorbed into the skin. Several physical techniques were developed to permeate the stratum corneum, in order increase the uptake of topically applied drugs. The importance of the water content of the stratum corneum in determining its properties is well documented. Skin water content gradually increases, going from the upper layer of the stratum corneum to the viable epidermis, reaching an almost constant value. The Tixel is a non-laser thermomechanical system which transfers thermal energy to the skin, dehydrates the stratum corneum and superficial epidermis and creates micropores, thus, enhancing drug delivery. Recent studies of Ti: sapphire-assisted drug delivery for different common and rare dermatological and aesthetic indications will be shared.

IPL Technology: What We Know from Research from Long-Term Analyses
Michael H. Gold • USA

Interesse pulsed light (IPL) devices really revolutionized the EBDS market when they arrived over 25 years ago. IPL technology was developed to treat vascular lesions, found to work well on pigment, and then on collagen and elastin itself, giving us the first real EBDS treatment for photorejuvenation.

Over the years, the IPL technology became more and more sophisticated and we are now at a time and place that the IPLs of today are safe, sophisticated, and predictable in giving our patients the results that we all want for their skin. What’s even more impressive is that, in a review of the largest clinical trial for IPL, use over 10 years, those patients who had yearly IPL treatments had continued improvement in their skin, actually showing a lowering of their actual age when photographic analyses were made by blinded investigators. This important clinical trial will be reviewed in detail.

Treatment of Facial Erythema with a 589/1319 NM Laser
David J. Goldberg • USA

Background & Objectives
For several decades, the gold standard for the laser treatment of vascular lesions has been the IR 595nm pulsed dye laser. This laser, although highly effective, has required cumbersome and costly maintenance requirements to replenish the dye medium. A brand new, novel solid-state laser that emits light at 589nm has the potential to effectively treat vascular conditions without the maintenance issues that come with the PDL. This study examines the safety and efficacy of a 589nm solid-state laser used for treatment of facial erythema.

Study Design/Materials and Method
This study is a single-center prospective cohort study of 30 subjects, 18 years of age or older. Fitzpatrick Skin Types I to IV, with varying degrees of facial erythema. Each subject received 4 full face monthly treatments with a solid-state 589nm laser. Delivered fluences were 10-15 J/cm² with a 46 msec pulse duration using a scanning handpiece. Participants then returned for follow-up one month after the 4th treatment. Efficacy was evaluated by investigator and participant assessments of facial erythema utilizing a scale from 0 to 4 (0 = no erythema; 4 = severe erythema). Digital photographs were obtained at each visit. Safety was assessed by compiling investigator-reported side effects throughout the study.

Results
All subjects received at least one level of improvement. No complications were noted.

Conclusion
A new 589nm solid state, non-rhodamine dye, solid state laser represents a novel approach for the treatment of vascular lesions.

Treatment of Nevus of Ota by Using a Pigment Specific Laser
Assi Lend • Israel

Background
Nevus of Ota, a condition characterized by dermal melanocytosis, responds well to a Q-switched Ruby laser (QSL). A novel picosecond (PS) 1064-nm Neodymium-Doped Yttrium Aluminum Gamet (Nd:YAG) laser is also currently available for this purpose. The number of sessions required for complete clearance and the interval between sessions has so far, not been clearly defined, yet multiple sessions are generally necessary.

Objectives
To report our experience treating Nevus of Ota using either a QSL or a PS 1064-nm laser.

Patients and Methods
We present a retrospective case series of 20 patients with Nevus of Ota who were treated by a QS Ruby laser (694 nm) or a PS 1064-nm laser. The baseline and most recent standardized photographs were assessed by two independent dermatologists and graded on a scale of 0 (exacerbation) to 5 (95%-100% improvement). Adverse events and Patient’s satisfaction were also recorded.

Results
Twenty patients were included in this study. Seventeen patients were treated with the QS Ruby laser and 3 patients by the picosecond 1064-nm laser. Number of treatment sessions ranged from 8 to 12. Sixteen patients achieved complete clearance. Average improvement was 4.76 on the scale of improvement. Patients’ satisfaction was high. Most patients experienced no adverse effects, yet 2 patients developed punctuate transient hypopigmentation, which improved upon subsequent follow-up.

Conclusion
Both the QS Ruby laser and the novel picosecond 1064-nm laser were found to be effective in treating Nevus of Ota.

Hair Loss and Hormone Replacement
André Berger • USA

His presentation will address the potential significant potential complication for androgen hormone replacement in both men and women to cause hair loss. An understanding of this complication and both its prevention and management is required to remove a major compliance barrier for androgen replacement therapy, and to ethically prepare these patients for a potential side effect and various treatment options currently available for them.

Current and Emerging Treatment Strategies for Hair Loss in Women of Color
Valerie Callender • USA

Hair loss is common in women of color and is associated with significant psychosocial complaints. Early clinical recognition and prompt initiation of intervention with medical treatment is critical to halt the disease process. This presentation will review the clinical presentations of nonscarring and scarring alopecia in women of color, use of dermatoscopy for early recognition of the disease process, and medical, procedural, and surgical interventions. In conditions that result in scarring alopecia, such as late-stage traction alopecia, frontal fibrosing alopecia or central centrifugal cicatricial alopecia, patients may benefit from procedural interventions, such as hair transplantation, low-level laser therapy, platelet rich plasma injections or micropigmentation.
tional minoxidil. Due to the limited number of effective therapies for AGA, platelet-rich plasma (PRP) has become an effective alternative treatment. PRP is an autologous concentration of platelets in plasma with numerous growth factors that contribute to hair regeneration.

The growth factors contained within the alpha granules of platelets act on stem cells in the bulge area of the hair follicles and stimulate the development of new follicles along with neovascularization. PRP now has become a prominent treatment modality for AGA. Diffuse hair loss and as in our studies in Alopecia Areata and Telogen Effluvium but standardization for PRP preparation and administration as well as a method to evaluate results have not been established yet which is its major drawback. This is about various methods, our method and evaluation of the effectiveness of PRP in hair restoration.

**NON-MEDICINE SYSTEMIC ANTI-ALOPECIA COMPOUNDS. IS IT POSSIBLE?**

Jaime Piquero-Casals • Spain

Hair loss, mainly represented by acute Telogen Effluvium in women and androgenetic Alopecia in men, is a frequent reason for dermatology consultation. Two active pharmacological ingredients are approved by the FDA for the treatment of AGA, finasteride and minoxidil. Both drugs have side effects and are effective in less than 50% of the patients. Some people are intimidated by the pharmacological approach to treat an all-fe-threatening disease such as alopecia. Food supplement are non-pharmacological approach that is easy to fit into everyday routine without significant side effects to treating this sometimes emotionally taxing condition. Cosmeceuticals are oral or topically applied products that do have a physiological effect on the skin. The term was coined by Kligman 30 years ago and is not recognized by the FD&C Act. Designed to deliver beauty and healthy aging benefits with particular emphasis on skin, hair and nails. Nutricosmetic sales (beauty supplements and tonics/beverages) reached $3.3 billion in global sales in 2015. Oral supplements are a practical option for persons wanting to address alopecia but without the side effects associated with drugs. Topical drugs and cosmetics can provide a safe alternative or adjuvant to systemic drug treatment, reducing the potential side effects. The right combination, targeting the multifactorial causes of hair loss, can improve penetration and achieve faster results. Systemic treatments or surgical options may be unsuitable or undesirable due to potential side effects, expense, or invasiveness. Topical drugs and cosmetics can provide a safe alternative or adjuvant to systemic drug treatment, reducing the potential side effects.

**PPR FOR HAIR LOSS**

Rahul Pillai • India

Androgenetic alopecia (AGA) is a common hair loss disorder caused by genetic and hormonal factors that are characterized by androgen-related progressive thinning of scalp hair in a defined pattern. U.S. FDA approved treatments for AGA include oral finasteride and topical minoxidil. Due to the limited number of effective therapies for AGA, platelet-rich plasma (PRP) has become an effective alternative treatment. PRP is an autologous concentration of platelets in plasma with numerous growth factors that contribute to hair regeneration.

**THE EFFECT OF DAILY ASPIRIN USE ON TOPICAL MINOXIDIL TREATMENT FOR PATTERN HAIR LOSS**

Andy Goren • USA

While topical minoxidil has an excellent safety record, its efficacy in the treatment of AGA is limited by the sulfonyltransferase enzymes activity in ORS of hair follicles. The same enzyme is significantly inhibited in the human liver by another OTC drug used by millions of men: aspirin. In this study, we demonstrated that low dose oral aspirin negatively inhibits the activity of sulfonyltransferase enzymes in the human hair follicle. Therefore, chronic use of low dose aspirin is likely to reduce the efficacy of topical minoxidil treatment.

To the best of our knowledge, this is the first study to explore the relationship between long-term aspirin use and its effect on topical minoxidil treatment.

**PPR FOR HAIR LOSS**

Rahul Pillai • India

Androgenetic alopecia (AGA) is a common hair loss disorder caused by genetic and hormonal factors that are characterized by androgen-related progressive thinning of scalp hair in a defined pattern. U.S. FDA approved treatments for AGA include oral finasteride and
WHAT’S NEW IN TOPICAL RX FOR ATOPIC DERMATITIS

A topic dermatitis (AD) is a chronic inflammatory skin disease affecting up to 15% of children and adults in western societies. Due to extreme pruritus often associated with AD, it has profound effects on quality of life of patients and their social surrounding. Most commonly used topical treatments comprise topical corticosteroids and topical calcineurin inhibitors. Vast progress has been made to better understand pathophysiology of AD leading to a variety of new systemic and topical treatment approaches.

Crisaborole is a benzoxaborole, nonsteroidal, topical ointment which inhibits phosphodiesterase 4 (PDE4), downregulating proinflammatory cytokine production. In clinical trials crisaborole has shown moderate efficacy in short-term trials. Positioning of crisaborole ointment in the treatment algorithm of AD is still problematic as head-to-head trials with topical corticosteroids and topical calcineurin inhibitors are missing so far. As treatment of AD always bases on skin care with emollients, restoration of skin barrier function, topical treatments to control inflammation and, in severe cases, systemic treatments further efforts must be taken to adapt the new treatments further to diverse clinical situations. On the long run, treatment of AD will include an individual approach to the specific genetic and clinical presentation of patients affected.

Conclusions: For many years pharmaceutical companies have avoided investments in research on AD. We have now entered a new era of profound understanding of AD pathophysiology paving the road for new treatment approaches.

WHAT TO CONSIDER WHEN PEELING DARKER SKIN TYPES?

Chemical peeling is one of the most commonly done cosmetic procedure and done with the intention to have controlled destruction of a part of or the entire dermis, with or without the dermis, leading to exfoliation and removal of superficial layer of the skin which leads to regeneration of new epidermal and dermal tissues. A peel is a versatile armamentarium in a treating physicians hands which is popular, simple, affordable and results in accelerated skin regeneration. The choice of peel is further dependent on the type and location of the skin lesion to be treated as well as skin type.

Acids actuation. This can be done by using the same chemical peel in slowly repeated “touch” technique, stopping application when a grey-white color appears: this is a focal peeling up to superficial reticular dermis. Due to the small size peeled, (less than 1 cm diameter) there is no healing problem. We do not recommend the use of stronger acid solutions, since these would be prone to induce side effects.

In hands, forearms and décolleté skins are much less permeable than facial skin and will need a more concentrated TCA peel. We recommend in these areas a combination of a focal deep peeling used in “touch” technique (Only TOUCH – class II medical device, 45% m/m TCA), exactly on lentigos, and up to reticolar dermis. The end point is a grey color, always keeping the skin elasticity when pinching the skin.

But large lentigos rarely come alone, they are surrounded by small ones. In this case, large lentigos are focally touched by Only Touch peel, when the full area receives Easy TCA (PG) at the end for treating small lentigos.

This combination associates pretty good results to a lower social eviction, pain and side effects risks compared to a deep full area peeling. Attention has to be paid to diagnose lentigos larger than 1 cm diameter since these could be in phase of cancerous degeneration and on the other hand, a focal deep peeling on a large area (more than 1 cm diameter) could induce pathologic scarring problems.

LASERS & EBDS – NEWER TECHNOLOGIES = FEWER COMPLICATIONS?

Pico-second laser technology has been in clinical use for the treatment of tattoos and a variety of dermatological disorders, mainly pigmentary, since 2012. The purpose of this retrospective study was to evaluate the safety profile and efficacy of the dual zoom and fraction 532nm and 1064nm Nd:YAG picosecond laser in the treatment of other selected dermatological conditions. Five hundred seventeen four dual Nd:YAG picosecond laser treatments performed in a single laser specialty center from April 2014 to October 2017 on 202 subjects with Fitzpatrick skin types II-VI were evaluated. Improvement was assessed by two blinded physician evaluators as percentage of problem clearance. Subject assessment of efficacy, satisfaction, and adverse events was performed using a questionnaire survey. Solar lentigines was the most commonly treated indication, followed by melasma, hyperpigmented scars, cafe-au-lait macules and verrucous epidermal nevus. Other indications included peri-orbital darkening, post-inflammatory hyperpigmentation, congenital nevus, nevus of Ota, Becker’s nevus, nevus spilus, tattoos, skin rejuvenation, peri-orbital wrinkling and acne scars. Different indications resulted in different levels of improvement ranging from poor-to-fair (acne scars, skin rejuvenation) to excellent-to-complete (Solar lentigines, tattoos, nevus of Ota, cafe-au-lait macules and verrucous epidermal nevus). Most of the patients required an average of 3.4 sessions until maximal improvement (range 1-8). All side effects were temporary and resolved within one month, and there were no long-term complications.
ETIOLOGY OF LASER COMPLICATION & PREVENTIVE APPROACH
Natalia Kalashnikova • Russia

BACKGROUND
The use of laser technologies in aesthetic medicine and dermatology is increasing every year. The absolute number of complications of laser therapy is also increasing.

PURPOSE
To evaluate of cause-associated factors of complications that had arisen in practice and develop a step-by-step preventive algorithm improving the safety of laser treatment for the patients.

MATERIAL AND METHODS
The analysis of the causes included the evaluation of published case studies and 20 years of practical experience of the network of clinics of laser cosmetic dermatology “Linlite” in Russia.

RESULTS
The performed analysis made it possible to develop an etiological classification of complications of laser dermatologic surgery. We systematized the complications and were able to identify six groups of causes. Five groups of them are in the area of doctor’s control and responsibility.

CONCLUSIONS
Increased doctor’s control of the treatment at each stage of treatment improves safety and reduces errors. A detailed analysis of each group of etiological classification of complications of laser dermatologic surgery was the basis for the creation and implementation of a step-by-step preventive algorithm.

VECSEL-BASED 690-NM LASER SYSTEM WITH 8 W OF OUTPUT POWER FOR THE TREATMENT OF VASCULAR LESIONS
Serge Mordon • France

We report a compact high-power yellow laser system for the treatment of cutaneous vascular lesions, such as telangiectasia and port wine stains. The system is based on optically-pumped vertical-external-cavity surface-emitting lasers (VECSELs), which have emerged as an attractive alternative to solid-state and dye lasers due to their enhanced functionality and broad wavelength coverage. This innovative yellow laser is capable of delivering up to 8 W of output power at ~690 nm and includes a handheld scanner for an easy delivery of light onto the skin. The scan area can be varied from a single spot (1.4-mm diameter) up to 49 spots covering an area of 1 cm². Additional features include adjustable fluence (0.52-3.0 J/cm²), scan patterns (line, square, hexagon) and pulse length (10-100 ms).

This Yellow laser has been compared to a traditional green KTP laser for the treatment of facial telangiectasia in terms of the treatment outcomes (primary objective). The secondary objective was to assess the functionality and reliability of this new Yellow laser from the perspective of the user. (ClinicalTrials.gov identifier: NCT03472869)

The study was a randomized split-face double-blinded study. One or two treatments were given based on the response of the first treatment. The improvement of telangiectasia was graded according to a 7-point Telangiectasia Grading Scale (TG2) by the subjects and blinded physicians. The subjects assessed the amount of pain during the treatments using Visual Analogue Scale (VAS), and evaluated adverse effects 2-3 days after the treatment(s) using a self-assessment form. At least 50% improvement was seen in 15/18 subjects after the first Yellow laser treatment, and a similar result was observed for KTP, as assessed by the blinded physicians (p = 0.29).

In the subjects’ assessment, 7/18 subjects had at least 50% improvement after the first Yellow laser treatment, whereas at least 50% improvement was observed for 10/18 subjects in the KTP side, the difference being significant (P = 0.008). The amount of pain was higher with the Yellow laser compared to KTP (67.7 vs. 34.6, p < 0.001). There was no difference in the frequency of erythema, crusturing or purpura between the devices, but more blistering and less edema were seen after the yellow laser treatment (p = 0.05). Treatment with the Yellow laser was evaluated to be 4.7-fold faster than with KTP and the Yellow laser system was more compact, narrow, lightweight, and easier to carry than KTP. This new Yellow laser enables significantly faster treatments, providing a similar clinical outcome in the treatment of facial telangiectasia.


HOW TO SELECT EFFICIENT DEFENSIVE STRATEGIES IN A LITIGIOUS ENVIRONMENT
Godfrey Town • United Kingdom

The practice of defensive medicine is not a new concept to the medical profession. The incidence of complaints that turn into allegations of negligence is certainly on the increase [1,2], and many aesthetic practitioners may not be aware of how vulnerable they can be to such allegations. This talk will explain how aesthetic practitioners using lasers and other energy-based devices can ensure they can mitigate their chances of a claim being held against them, as well as defend themselves should they be faced with a claim.

All aesthetic professionals have a ‘duty of care’, which is a legal obligation not to cause a patient injury while in their care [1]. To mount a legal case successfully against a clinic, a breach of duty, often referred to as negligence, must be suggested by the circumstances surrounding the patient’s concern. Contrary to popular perception, the legal test of negligence is actually quite hard to achieve, as a direct act or culpable omission by the defendant has to be demonstrated. This must result in injury to the claimant as a reasonably foreseeable consequence of the act or omission of the defendant. Sometimes insurers will resolve cases by simple negotiation or as a result of mediation on what are called ‘settlement terms’ rather than by a court, so as to limit their exposure to costs [2].

The incidence of complaints that turn into allegations of negligence is increasing and aesthetic practitioners are often unaware of their vulnerability to potential litigation. Compliance with regional regulation and licensing provisions will confer a level of protection for the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arise. Valid patient consent and the practice of proper protocols and regional regulation will confer a level of protection to the operator, should a complaint arises.
the most likely to be prioritized in future treatment. Areas least likely to prioritize were perioral lines and lips. African Americans expressed the lowest consideration rate for injectable treatment options. A primary reason for considering injectables was wanting to “look good for their age”; although cost, safety, and possible side effects were cited as the greatest barriers.

CONCLUSIONS

African American women reported the slowest onset and least severe signs of facial aging. Common areas of concern were aligned with treatment priorities, highlight- ing the tear trough and submental areas. For clinicians, evaluation of these areas as well as addressing the safety/side effects of injectables during the consultation may provide valuable guidance for patients and broaden their range of treatment considerations.

### ANYTHING NEW IN TOXINS?

**Botulinum toxin (Btx) delivery for rare and common dermatological indications**

Ofir Arfa - Israel

Botulinum toxin (Btx) blocks the release of the neurotransmitter acetylcholine from peripheral nerves and thus might alter cutaneous vasodilation. Due to its characteristics and high molecular weight, Btx cannot penetrate the highly impermeable stratum corneum while applied to bare skin. Disruption of the outer stratum corneum by mechanical, chemical, or physical approaches increases skin permeability. Selective thermal ablation of stratum corneum dramatically increased skin permeability for transdermal drug delivery Above 3600C, transdermal flux increased by many orders of magnitude. The Tixel is a non-laser thermomechanical system which transfers thermal energy to the skin, dehydrates the stratum corneum and superficial epidermis and creates micro pores, thus, enhancing drug delivery. This study aimed to assess the safety and efficacy of a novel non-laser thermal resurfacing system of increasing skin permeability for botulinum toxin type A in rare (example Hailey-Hailey disease) and in common (example Rosacea) dermatological conditions.

**Botulinum toxin injection for masseter muscle hypertrophy**

Adolfo Napoleo - USA

The masseter muscle is a quadrangular muscle that crosses the mandibular Ramus and coronoid process. It has both superficial and deep heads. The re- duction of the superficial head of the masseter muscle improves the contour of the lower face while having a minimal effect on the mastication or temporomandibular joint function. Injection of Botulinum toxin into the mas- seter muscle results in a chemical denervation at the neuromuscular junction. The ensuing muscle atrophy reduces the bulkiness of the lower lateral face and gives a soft round contour to the lower face.

**Photodynamic therapy of actinic keratosis using light emitting fabrics (LEF)**

Serge Mordon - France

Photodynamic therapy (PDT) is an effective conser- vative treatment for actinic keratoses (AK). Howev- er, pain and heterogeneous illumination from rigid panels impede the treatment. To provide a more homogeneous illumination, we have developed a Light-Emitting Fabric (LEF), called Phosistos®. A randomized, controlled, mul- ticentre, intra-individual clinical study was conducted to compare this new device (P-PDT) to the conventional PDT using a LED Panel (C-PDT). Forty-six patients with grade I-II actinic keratosis of the forehead and scalp were treated with P-PDT on one area (n=280 actinic ke- ratosis) and with C-PDT on the contralateral area (n=280 actinic keratosis). The primary endpoint was the lesion complete response rate at three months with an abso- lute non-inferiority margin of -10%. Secondary endpoints included patient-reported pain scores, emergence of new actinic keratosis, incidence of adverse events and cosmetic outcome. Results show that at 3 month follow up, the lesion complete response rate with P-PDT was non-inferior to that with C-PDT (79.3% vs. 80.7%). Moreover, the patient-reported pain score was significantly lower with P-PDT compared to C-PDT (mean ± standard deviation: 0.3 ± 0.6 vs. 7.4 ± 2.3, p=0.0001). At six months, the lesion complete response rate with P-PDT was non-inferior to that with C-PDT (94.2% vs. 94.9.7%). There was a lower incidence of new actinic keratosis for the area treated by P-PDT compared to C-PDT (8.6% of patients vs. 39.1%). In conclusion, PDT with the innovati- ve LEF device is similar in terms of efficacy than C-PDT in treating actinic keratosis of the forehead and scalp while leading to much lower pain scores and fewer adverse events. (ClinicalTrials.gov Identifier: NCT03078659)

**Srf for non-melanoma skin cancer**

David Goldberger - USA

Superficial Radiation Therapy (SRT) of Non-melanoma Skin Cancer (NMSC) has become a very popu- lar non-surgical approach to the treatment of non-mela- nomas skin cancer. With increasing time and experience, the pros and cons of this approach has become clear. Recently published Consensus Guidelines have allowed for an organized science-based approach to the treat- ment of NMSC. This talk will focus on the role of SRT, among other techniques in the treatment of skin cancer with an emphasis on and review of the recently publis- hed guidelines.

**Use of Lasers and other devices to treat cancerization field**

Jaime Piquero-Casals - Spain

Actinic keratosis (AK) lesions are surrounded by areas of subclinical, non-visible sun damage called field cancerization. The primary endpoint commonly used in investigations of new AK treatments is the complete clearance rate of lesions. Although this end point is easy to measure and detect, and it is often challenging to achieve, may be confounded by the appearance of subclinical lesions during treatment, and most patients and physicians would consider a reduction in lesions as treatment success.

Management should be directed at individual lesions and over the affected area. Field-based treatment can act to manage a range of actinic changes and topical therapies, chemicals peels and photodynamic therapy are suitable. Usually, focal destructive therapies such as curettage and cautery or cryotherapy are limited to lesion treatment.

Another useful treatment is use fractional ablative laser as CO2 and Erbium Yag 2940nm alone or combined with Photodynamic therapy (PDT) and a photosensiti- zing chemical substance as Methyl aminolevulinate or aminolevulinic acid. In this presentation we make a brief summary of treatments using new technologies.
Radiofrequency (RF) is a major energy-based medical technology which has made a large contribution in clinical practice in the last two decades. Clinical uses of RF do not use actual radio waves, but simple electricity which is frequency modulated to achieve frequencies of over 250 Hz which do not disrupt biological tissues compared to the potentially fatal 60 or so Hz of domestic mains electricity. When electricity meets resistance it creates heat, so called Joule heating, and contact RF uses this property to create electrothermal damage to target tissue to start the wound-healing process and tighten lax skin, smooth out lines and wrinkles and remodel a variety of hypertrophic and atrophic scars. Contact RF at frequencies of from 250 Hz to 5 MHz can be delivered in a number of ways from electrodes on the skin, to electrodes actually in the skin such as the more recent microneedle electrodes. Contact RF depends entirely on tissues which can conduct electricity, i.e., skin. Fat on the other hand is a very poor conductor and therefore cannot respond to contact RF because fatty tissue is a dielectric, a poor conductor of electricity, which contains millions of randomly arranged units called dipoles. However, with an electromagnetic (EM) field at much higher frequencies selective dipole heating occurs in a dielectric such as fat. A specific EM frequency, 27.12 MHz, has been used in diathermy medicine to selectively heat tissues of low conductivity, properly termed poor permittivity, such as tumors. Noncontact field RF is a novel method of delivering an oscillating EM field from an irradiator not in contact with skin, which can selectively heat only fat and cause gentle apoptosis of adipocytes, resulting in effective circumferential reduction. Thus all RF systems are not created equal, and have different targets.

RF SKIN TIGHTENING AND RF MICRONEEDLING: NEW CONCEPTS
Michael H. Gold • USA

The use of RF energy for skin tightening has become a mainstay in many aesthetic practices. This presentation will review the myriad of devices that are currently available and show the differences between monopolar and bipolar RF and how some use multiple “poles” to achieve their effects. The presentation will also show how this technology is incorporated into one’s clinical practice.

LIGHT-BASED DEVICES COMBINATION FOR THE TREATMENT OF SCARS
Didac Barco • Spain

Scar tissue production has different pathogenic phases with several chromophores to be targeted by light-based devices in each of them, especially during the first month after the injury that caused the wound. The time of application of the treatment is key to take advantage of every pathogenic step in scar formation and early use of light-based devices permits to guide the process of wound healing and reduce the probability of the emergence of a keloid or a hypertrophic scar.

We will focus on when and which light-based devices are suggested to be applied during the scar tissue formation, highlighting the importance of an early approach to target haemoglobin during the first weeks (with PDL, KTP, LBO, Nd:YAG or IPL) in combination with fractional non-ablative and ablative lasers to aim collagen production.

Early approach and combination of different devices is currently accepted to be the most convenient tactic to enhance therapeutic response and decrease the likelihood of an unpleasant scar.

RF, ULTRASOUND AND TOPICAL MEDICATION FOR SCAR TISSUE TREATMENT
Mario A. Trelles • Spain

Scars are a consequence of a tissue repair from injuries of different etiologies. Scar tissue degree varies from moderate to severe. The skin affected by post-acne scarring has an abnormal contour, with most scars being depressed below the adjacent normal skin. Many treatment methods have been developed for scar improvement, but in general, all of them have disadvantages because of being either too mild and ineffective or too aggressive and complicated.

This presentation reviews various techniques which have been used by the author, together with his actual modality that is successfully used for treating scars. The achieved experience using unipolar fractional ablative radiofrequency technology used with acoustic pressure ultrasound guided dermal injection of Retin A or Triamcinolone, through RF Pixel fractionated micro-channels.

Four treatment sessions at 3-week intervals prove to be an effective treatment, as it has been published. Studies conducted on acne scars demonstrate significant improvement, both on the face and on the back and shoulders.

A treatment with the Legato® device mixed RF with ultrasounds permits to introduce drugs to enhance results of treated scars. This has been proved by staining with fluorescein the above-mentioned drugs noticing its effective deposit into the dermis.

The intensity of dermal fluorescence in treated samples containing the drugs, when compared to that of autofluorescence controls demonstrates significant differences. Transepidermal delivery procedure of drugs carried out by RF and ultrasounds facilitates prolonged and effective dermal effects when treating scar tissue.

The bimodal procedure presented is safe and effective in reducing scarring tissue, representing a good therapeutic alternative of great interest.
BIOCHEMICAL PERSPECTIVE OF FAT PHYSIOLOGY AFTER APPLICATION OF HIFEM FIELD TECHNOLOGY: ADDITIONAL INVESTIGATION OF FAT DISRUPTION EFFECTS IN A PORCINE STUDY

**Presenter:** Yael Halaas  
**Authors:** Yael Halaas  
Jan Bernardy  
USA  
Czech Republic

**BACKGROUND**

Multiple studies reported fat tissue reduction after application of the High-Intensity Focused Electromagnetic (HIFEM) field technology, yet cellular level evidence of the exact mechanisms remains scarce. This study aims to verify or refute previous single-study histological evidence and further investigates the proposed mechanism of apoptosis induction.

**MATERIALS AND METHODS**

The thigh of four Large White pigs were treated with HIFEM for 30 minutes. Subcutaneous fat punch biopsies were then collected from the application area before, immediately after and 8 hours post-treatment. Control samples were taken from the abdomen immediately after and 8 hours post-treatment. The histological samples were used for the detection of pro-apoptotic DNA markers (BAX, BCL-2, TXNIP, MMP9, TNFα) and measurements of the level of free fatty acids (FFA). The pH of the fat tissue was also measured at the biopsy site.

**RESULTS**

The levels of FFA in the treated fat tissue increased in all treated animals on average by 127.1% immediately post-treatment and by 134.1% eight hours post-treatment, indicating a rapid breakdown of lipids. In the same region, the average fat pH changed from 7.30±0.12 at baseline to 6.60±0.07 immediately post-treatment, and then to 7.19±0.12 eight hours post-treatment. The levels of BAX, TXNIP, MMP9, and TNFα increased post-treatment while BCL-2 expression decreased. Control samples showed constant levels of pH and pro-apoptotic markers. The FFA in control samples increased on average between 41.6% and 51.4%.

**CONCLUSION**

Through observation of the increase in pro-apoptotic markers, we managed to replicate the previously reported signs of elevated fat apoptosis induced by HIFEM technology. These effects were accompanied by increased FFA levels indicating a rapid lipolytic reaction, and by reduced pH levels due to the increased acidity in the fat tissue. Further research is required to explore the potential of non-thermal induction of apoptosis fully.

NEEDLE SHEIKHING TREATMENT OF VITILIGO: A STUDY OF NEEDLING AND UVB FOR VITILIGO

**INTRODUCTION**

Vitiligo is an ever-increasing problem in all age groups. Different regimens in practice are sun exposure, UVR and psoralens. My paper presents an original study where NEEDLING is combined with narrow band UVB. Our hypothesis is that epidermal cells in the skin around the vitiligo patch can be pushed from normal skin into the vitiligo patch and subsequent UVB induced melanogenesis treats vitiligo.

**METHODS**

A 31G needle is softly pushed through the normal skin into the vitiligo patch at level of dermo-epidermal junction parallel to skin. This needle push called NEEDLING pushes epidermal cells including melanocytes into the vitiligo patch as micro inoculation to produce multiple small populations of melanocytes, which is then exposed to increasing doses of UVB to cause melanogenesis and hence repigmentation of the area. Multiple needle pushes are made through the edge one centimeter apart. All patients having needling once weekly and UVB 3 times a week. This study was done over 170 patients in both sexes in different age groups from July 2009 to July 2013. A comparison was also done with UVB alone. Photos of all patients taken at the start and then every 3 weeks. Biopsy of few patients performed to observe the effects of needling.

**RESULTS**

This combination treatment has proved very safe and effective against vitiligo as compared to UVB alone in all age groups. All patients had fast repigmentation. The best results are on face with more than 90% repigmentation. Repigmentation is good but slower towards peripheral parts. Repigmentation specially noted to start from edge of vitiligo patch (where needling is done) as tiny black dots and further needling through these dots gradually repigmented the central areas. Repigmentation is also good over areas with grey hair with this technique as needling uses melanocytes of the surrounding skin rather than the follicular cells. This further strengthened the idea of needling.
TREATMENT OF NON-ATOPIC DERMATITIS WITH POLARIZED UV FREE POLychROMATIC LIGHT: A CASE REPORT

Presenter: Alberto Leguina-Ruzzi • Czech Republic
Authors: Alberto Leguina-Ruzzi • Czech Republic
Kishan Rajnikant Raichura • United Kingdom
Sarah Karis Tonka • United Kingdom
Semira Kwabi • United Kingdom

A topic dermatitis is a common inflammatory condition, which is potentially debilitating and can compromise life quality. Pruritus is the common presenting symptom leading to scratching that results in secondary skin changes. Current treatments are based on topical preparations, immunomodulating drugs and UV phototherapy; however, the adherence and success of these remain limited, and eczema remains a bothersome chronic condition which can significantly impact on our patients’ quality of life.

Polychromatic/non-coherent UV-free light is used as therapeutic option for the treatment of several musculoskeletal disorders and skin conditions. However, it has not as yet been tested in the management of atopic dermatitis.

In this case report we present a 67-year-old female patient who has suffered with moderate atopic dermatitis for the last 20 years, and had undergone multiple treatments in that time, without significant improvement or relief from her symptoms. She was treated for six weeks with daily polarized light therapy (PLT) applications (10 minutes/area). Our results showed that light therapy offered a significant reduction in erythema of the affected zones with a concomitant reduction in pruritus and dehydration of the skin, without side effects or discomfort.

Conclusions: in this study, six weeks of PLT reduced erythema and lesion size in the hands and popliteal fossae. However, in the popliteal fossae, we observed an early increase on redness and its size, but this was not associated with active vesicles or flares, and moreover resolved after the third week of PLT. In general, a significant reduction in itchiness and dryness was observed, increasing the patients comfort and overall adherence to the non-pharmacological treatment.

More clinical studies are needed to understand the therapeutic properties of PLT and to acknowledge its benefits, even though our findings suggest encouraging possibilities for the use of PLT as management strategy for recurrent moderate dermatitis.

COSMETIC TREATMENT OF SKIN PHOTODAMAGE WITH IPL AND ND:YAG 1064 NM LASER

Lázaro Pérez • Spain

INTRODUCTION
Skin photodamage is one of the most frequent reasons of consultation in dermatology, medicine and cosmetic surgery. The skin submitted under a chronic and excessive exposure to ultraviolet radiation and its cumulative effect, among others agents as environmental factors, toxic habits; nutritional, endocrine and metabolic disorders; drugs and medications side effects; genetic and emotional factors, contribute to a chronic “cascade of defensive events” that ends in skin aging.

MATERIAL AND METHOD
1110 patients have been treated with age between 24 and 81 years old and I-V Fitzpatrick skin photo-type, who presented various types of benign pigmented and diffuse vascular lesions on the skin. We used an Intense Pulsed Light device with cooled (5-10 or 20°C) sapphire window of 10x30 cm and wavelength range of 520-1100 nm at three cut off filters of 520, 560 and 580 nm and their respective pulse width of 2-12, 12-30, and 30-60 ms. The fluence range used was 12-27 J/cm². We combine the use of Nd: YAG 1064 nm laser system in microsecond mode to complement the therapeutic effects of IPL. The Nd YAG 1064 nm provide a volumetric specific heat to deeper skin layer which cannot be achieved by IPL wavelength.

RESULTS
There was an improvement of skin photodamage or photaging in all cases with elimination or significant reduction of pigmented lesions, diffuse redness and the improvement in skin texture with reduction of elastosis, fine wrinkles and pore size which were observed in situ and before and after photos, by patients, doctors and independent observers. After each session patient showed mild to moderate erythema and swelling lasting 2 to 3 hours. Pigmented lesions darkened, forming fine crusts that fell at 7 to 10 days.

CATEGORY: (AESTHETIC) DERMATOLOGY & (AESTHETIC) PLASTIC SURGERY

KELOID SCARS BETWEEN TRIAL AND RESISTANT NATURE
Zainab J. Albarana • Jordan

Abnormal wound healing after dermal injury resulting in formation of keloid scars is a challenging condition to both patients and physicians. Up to this date there is still no single satisfactory treatment option with predictable results. In our practice, we apply a multi-modality approach. This approach showed the best results.

During this presentation, we will go through the ancient history of keloids, in addition to literature review of previously used treatments, and their mechanism of action.

Advances in the understanding of wound healing process lead to the focus on new treatment options, such as: calcium channel blockers, topical miropoiquid, botulinum toxins, hyalurondisate, POL laser, fractional laser, and fractional radiofrequency, or the combination of the previously mentioned treatments.

In this presentation will share with you some of our actual patient cases for whom we used a combination treatment, with emphasis on the resistant nature of keloids, with great emphasis on the prevention with using botulimum toxins early on to new wounds to prevent the development of keloid or hypertrophic scars.

MICROTIA-ATRESIA REPAIR WITH HEARING IMPROVEMENT SURGERY
Ashesh Bhumkar • India

Surgical Repair To Improve Natural Hearing Plus Acoustic Reconstructive Surgery Using Autologous Rib Cartilage Or “Medpore” – A Single Stage Surgery By A Single Surgeon.

Basis
Advances In Understanding “Natural Hearing” its totality, which is way beyond the conventional Peretone Audiogram. The 3 Dimensional aspect of the hearing is important for a person’s sense of physical position in spatial orientation.

Advances in imaging – CT Temporal Bone. The 0.3mm study of temporal bone is able to show the stapes ossicle in its entirety, including its shape and size. Plus it is able to show the footplate in great detail.

Additionally, this CT Scan is able to show the entire course of the Facial Nerve in its 3 dimensional course.

These above factors have brought higher safety to attresia surgery for hearing improvement.

MRI study to accurately predict the presence of real Middle Ear Cholesteatoma versus an external canal cholesteatoma has made pre-op decision making sharper and predictable.

CT Scan study of the rib cartilage has made selection of the side of harvesting accurate. It allows the surgeon to plan the skin incision to be precise and as smallest in length as possible.

Study of the vascular architecture of the skin of the deformed ear & the periauricular skin by means of advanced Doppler and CT Angiograms allows the surgeon to plan the skin incision and creation of the skin pocket with the least possible disruption to the vascular supply. This enables healthier wound healing which impacts greater quality outcomes.

The Rib Cartilage Sculpting & Creating the framework are already standardized by now.

This talk will present our algorithm of decision making and our special experience based skin approach in Au-
lower eyelid defects after tumor resection. and to report the authors' experiences of full-thickness ectropion if the lesion is more than 0.5 cm. This clinical sure is often restricted and it increases the incidence of surgical options and compromises in the dynamic ex-

In this study, the authors reported a modified technique for reconstruction of lower eyelid defects with satisfactory functional and aesthetic results in the long term.

**CONCLUSION**

The treatment is noninvasive with no or minimal down-
time. The plasma has a strong rejuvenating effect on the skin. During the treatment, we combine two different ga-
esia: argon and nitrogen.

The skin is not only significantly rejuvenated but also very tight after the treatment. Also, the quality and appea-
rance of the skin are significantly improved. The treat-
ment is safe for all skin types and can be done all year around. The result is right seen after the treatment and gets better over time. This treatment represents a real alternative over the fractional lasers and is much more safe, especially for the people with darker skin.

**BRUXISM TREATMENT WITH BOTULINUM TOXIN TYPE A. PROSPECTIVE STUDY**

**INTRODUCTION**

B ruxism is defined as grinding or clenching of teeth, involuntarily and intensely, due to hypertrophy and/ or contraction of muscles related to chewing, with par-
ticular involvement of masseter muscles. This situation can happen during sleep or wakefulness indistinctly.

Different treatments are intended to limit destructi-
ve effects of bruxism on different biological structures, especially on the temporomandibular joint. Treatments are variable and range from irreversible occlusion, inter-
position of spints, pharmacological therapies or cogni-
tive-behavioral approaches.

The aim of this study was to investigate the relaxation ef-
fact of botulinum toxin type A (BoNT-A) injection in mas-
seter muscles and its relation to the relief of symptoms in patients with bruxism.
According to recent statistics from ASAPS US the number of surgical lifts were 125,000 while the number of non-surgical procedures were more than 8 and a half million. This means a lot of patients don’t want surgical procedures and often surgery doesn’t live up to their expectations. I will explain how to combine threads and fillers. It is one of the best alternatives to surgery. It is effective, non-invasive and has long lasting results. It permits a patient to continue with their normal life after visiting the clinic. It is based on combining fillers and sutures.

There are three steps:

First step is to restore volume. It replaces changes to the bone and lost of volume in deep fat compartment. I inject fillers on strategic points working with facial proportions, it permits a lifting of the face without getting too much volume.

Secondly I restore the superficial fat compartments using threads, I will explain the most effective patterns of sutures for achieving amazing results.

Third step is restoring the mobile area like nasolabial and marionette area and small depression with AH with high cohesivity. The results are natural, long lasting and without downtime. Getting efficient results on a smaller budget ultimately improves client satisfaction.

Different possibilities for minimal-invasive aesthetic breast remodeling by elastic thread

Author describes a minimal-invasive technique to reshape photic breast (as natural as with implant) without scars nor tissue undermining.

Material and methods

The technique consists of using a two components elastic thread with double tips needle to be placed in different concentric circling into subcutaneous tissue, under local anesthesia.

Exclusion criteria

Autoimmune disease, extremely big breast and 4th degree ptosis.

Results

Technique is really new and results till now are positive with patient satisfaction.

Conclusion

Elastic thread breast reshaping is the only non-invasive technique that permits to obtain good results without implants, without evident incision, without scars and without tissue undermining.

Key words

Elastic thread “Elasticum”, two tipped needle, breast reshaping.

Butt lifting with spider web technique

Aging of skin and also sagging buttock is an unavoidable process. Classical buttock lifting is invasive, so it is difficult to recommend it to patients especially to those who do not have severe gluteal ptosis. In addition, the gluteal area is a large area change among the joints. Therefore, this surgery can cause pain during hip flexion after lifting using a conventional thread. Spider Butt Lift using a thread with high satisfaction from patients. All patients underwent lifting of both buttocks using threads. Drew a circle along the outer edge of the buttock like spider web image and put the threads. With the effect of threads, lifting was done. With these threads specifically, because the sutures are largely composed of POLYDIOXANONE (PDO), a bio-stimulatory effect occurs in the skin with the production of both Type 1 and 3 collagen. This collagen increase leads to a volumizing effect that continues for up to two years, enhancing the quality of the skin in the long run. Spider Butt Lift is effective in pre-ptosis to moderate gluteal ptosis because of the elasticity of the thread, postoperative pain is low on hip flexion, so the lifting is done naturally. Also people want bigger butts. However traditional procedures for butt lifting and enlargement have multiple disadvantages. In this case with Spider Butt Lift, we used an innovative technique combining thread lift with fat transfer to buttocks. The goal of Spider Butt Lift is to improve the anteroposterior projection of the gluteal region. The advantages of the technique are its simplicity, that it produces no traumatic effects, and that it is performed with local anesthetic, reducing surgical time. Recovery is rapid and usually produces only mild discomfort. It is possible to combine this procedure with liposuction techniques. As
far as I’m concerned, the aim is to tighten the buttocks as well as the overlying skin. Spider Butt Lift has the advantage of lifting the desired parts of buttocks without scar, under local anesthesia, with little downtime and minimal discomfort and complications as it is a minimally invasive procedure.

COMPLICATIONS DURING THE APPLICATION OF TENSIONING THREADS: WHAT TO DO?

Susana Misicione • Venezuela

PDO threads are a very effective lifting technique and easy to execute if the patients are well chosen and you have manual skill when placing them. There are multiple complications ranging from traumatic, infectious and the most feared are that the threads become evident or foreign bodies reactions. I will present how to resolve these complications; it is very important to resolve them as soon as possible and be aware that they always have duration proportional to the half-life of the thread; this is why the technique is quite safe.

09.00 - 11.00h

CLINICAL DERMATOLOGY – INDICATIONS FOR LASERS & EBDS

Dirk-Harald Gröne • Germany

The field of Genitoanal Diseases is often reduced to STD and venerology. Many women rather consult the gynecologist or proctologist than to see the dermatologist.

This forgotten subspecialty of dermatology gains new momentum in view of laser medicine, photo dermatology and minimal invasive intimate surgery.

In this talk we review our perspective on that field and share some thoughts on minimal invasive patient therapies in a gym chair and lithotomy position. This change in the setting towards a more gyneocological examination routine facilitates the dermatologist’s view on area dependent symptoms of common skin diseases including Psoriasis inversa, lichen sclerosus, intertriginous eczema, acne inversa, perianal scars, Vitiligo or cellulite – just to name a few. Working tools are Excimer, PDT, PUVA, PRP, Cell transplants, microinjections, lasers, chemical and bleaching agents, besides surgery and drugs. Many practices may already perform this kind of early cosmetic treatments, but do not realize the perspective of device dependent regenerative medicine and the benefit for the patient with intimate symptoms. The reality is that cosmetic findings and underlying medical diseases often appear as one. With this talk I want to raise awareness for the widespread intimate concerns and skin conditions parallel to genitoanal diseases. This happened with facial esthetics some years ago is happening with regenerative (body) treatments. Developing a multi specialist team for specialized stem cells injections that helps with atrophic scars, intimate surgery against vaginal relaxation or laserspecialists against post inflammatory hyperpigmentation is not farfetched. If you look at the value for the patients and the profitability in that field, it is not usual to see upwards of 50% of the revenue in a derm clinic coming from vaginal rejuvenation, fat grafting, subcision, photoderm or PRP. This is because the per unit profitability of those therapies is high, as with any new procedure that comes to market allowing you to charge a premium.

Conclusion: It is important to do an overall comprehensiv analysis including lithotomy position (Steinschnittlage) on someone who comes in with intimate concerns and for treatment of genitoanal disease. Patients with Vitiligo, lichen sclerosus or pruritic skin benefit from full medical services.

09.00 - 11.00h

EMERGING THERAPIES IN GENITOANAL DISEASES AND VULVAR SKIN CONDITIONS

Ganesh S. Pai • India

Cryothermal therapy can be used to treat hyperacti glands of the body, specifically those associated with acne & hyperhidrosis. Freezing the water within the sebaceous glands diminishes its function. Treatment in three cycles at two week intervals leads to considera reduction in nodular acne. There are three phases of therapy, pre-therapeutic, therapeutic and thawing phase, lasting a total of 10 minutes. The main therapeutic phase maintains the skin temperature at 0o centigrade for 8 minutes.

Infrared lasers of 1540 nm erbium glass penetrate deep into dermis targeting water as the chromophore. The sebaceous gland contains water. 1540 nm erbium glass has been found to have long standing effects with three treatments at intervals of two weeks. Thus the gland is rendered dysfunctional and shows reduced activity. Inflammation is controlled significantly. The persistent nodules of grade III & grade IV acne showed remarkable reduction in size, pain and colour (from red to brown).

Cooled vacuum assistance with high energy delivery when stacked gives rise to significant reduction of acne. No side effects are visible. With careful patient selection resistant local and persistent acne vulgaris can be controlled. It can also be combined with fractional erbium for superficial scarring, fractional CO2 for deep scarring or Pico QSW laser for PIH.

The combination of cryothermal with erbium glass therapy sequentially in the same sitting constitutes an important protocol in treatment of moderate to severe inflammatory acne patients who do not respond to conventional topical, oral antibiotics and isotretinoin therapy.

09.00 - 11.00h

PROCEDURES IN MELASMA AND HYPERPIGMENTATION DISORDERS

Jaime Riquero-Casais • Spain

Melasma represents a frequent disorder of pigmentation that mainly affects women with genetic predisposition as of 35 years of age. The main treatment modalities include prevention of sunlight, depigmenting topical agents, chemical peels and lasers. However, it is common to observe incomplete results and frequent recurrences that make melasma and other hyperpigmentation disorders a frustrating condition.

There is a growing interest in oral treatment with tetracycline and in oral supplements with extract of Poli podium leucotomos. Chemical peels are procedures widely used in the daily practice of the dermatologist. The patient must be chosen carefully and perform a pre-treatment preparation to avoid undesirable effects. Several laser devices as Tulum, Pico Securities and fractionated Q-Switch are excellent alternatives to improve results. In this presentation, most of these alternatives with pharmaceutical and cosmeceuticals are proposed.

09.00 - 11.00h

TREATMENT OF DIFFICULT PIGMENT DISORDERS IN DARK SKIN PHOTOTYPES WITH LASER TRANS EPIDERMALIZATION OF COSMECEUTICALS

Mario A. Trelles • Spain

The Er-YSGG laser was used at 9 W in 1-2 treatment sessions. During radiation laser energy was delivered at 10 Hz by 10 fractional micro-beams, without necessity of anesthesia by the aid of water and compressed air sprayed by the device. Patients received partial or total facial treatment and the clinical efficacy, tolerance, adverse effects, complications, and tissue changes were evaluated.

No patient presented significant complications. Epidermis and dermis changes as result of treatment, were found beneficial. Not only the pigment disorder but the overall facial skin condition experienced a notable improvement. The mean reduction of basal skin pigment before treatment was 70% to 80% from the first treatment session. Patients were satisfied or very satisfied and would recommend the combined laser-derm-cosmeceuticals transepidermalization treatment.

Results show an excellent safety/efficacy profile for this method of treatment which, based on the relation to the use of chemicals and laser treatment, (2), is considered improves results achieved by standard facial peels or laser treatments, particularly on dark skin patients.

(1) The antigen formula used is a combination of Hydroquinone, Dexamethasone, and Retinol A.


AI THAT KNOWS YOUR SKIN: WHAT IS THE TECHNOLOGY BEHIND IT?

Anastasia Georgievskaya • Russia

Computer Vision Methods powered by AI-technologies are becoming extremely popular in medical imaging while AI Technology itself is propagating at a high pace to our daily Life. The potential for Skin Health Industry is vast, starting from Skin Health and beauty assessment to generation of skin images to simulate the effects of the Treatment. Combination of Computer Vision, Data Analytics, chatbots and cloud can simplify and bring to the next level the diagnostics processes. Still, Methods have limitations and challenges which one should be aware of to make most of the implementation of AI to daily Practice.

This prospective clinical study reports on the efficacy and safety of a method of facial skin treatment using a 2780 nm Er:Cr:YSGG laser in combination with a pigment chemical formula (1). Treatment was performed in 30 patients presenting moderate to severe signs of benign facial pigmented disorders.

The Er:Cr:YSGG laser was used at 9 W in 1-2 treatment sessions. During radiation laser energy was delivered at 10 Hz by 10 fractional micro-beams, without necessity of anesthesia by the aid of water and compressed air sprayed by the device. Patients received partial or total facial treatment and the clinical efficacy, tolerance, adverse effects, complications, and tissue changes were evaluated.

No patient presented significant complications. Epidermis and dermis changes as result of treatment, were found beneficial. Not only the pigment disorder but the overall facial skin condition experienced a notable improvement. The mean reduction of basal skin pigment before treatment was 70% to 80% from the first treatment session. Patients were satisfied or very satisfied and would recommend the combined laser-derm-cosmeceuticals transepidermalization treatment.

Results show an excellent safety/efficacy profile for this method of treatment which, based on the relation to the use of chemicals and laser treatment (2), is considered improves results achieved by standard facial peels or laser treatments, particularly on dark skin patients.

(1) The antigen formula used is a combination of Hydroquinone, Dexamethasone, and Retinol A.


AI THAT KNOWS YOUR SKIN: WHAT IS THE TECHNOLOGY BEHIND IT?

Anastasia Georgievskaya • Russia

Computer Vision Methods powered by AI-technologies are becoming extremely popular in medical imaging while AI Technology itself is propagating at a high pace to our daily Life. The potential for Skin Health Industry is vast, starting from Skin Health and beauty assessment to generation of skin images to simulate the effects of the Treatment. Combination of Computer Vision, Data Analytics, chatbots and cloud can simplify and bring to the next level the diagnostics processes. Still, Methods have limitations and challenges which one should be aware of to make most of the implementation of AI to daily Practice.
COMMUNICATIONS FOR DECISION SUPPORT IN AESTHETIC MEDICINE

Marius Khan • Germany

Today, the vast amount of data produced daily by users worldwide and the development of powerful hardware components like Graphics Processing Units (GPU), realized the current renaissance of artificial intelligence (AI).

Health care is becoming rapidly an important domain of AI, since medical examinations and treatments are getting more data-intensive. Recent work show promising results in the field of clinical imaging (e.g., early diagnosis of Alzheimer from brain MRIs, classification of skin cancer), genomics or the classification of diseases based on computer vision tasks in skin research, its Challenges and Applications.

THE BEAUTY OF AI: INTELLIGENT SOLUTIONS

Mariano Khan • Germany

Health care is becoming rapidly an important domain of AI, since medical examinations and treatments are getting more data-intensive. Recent work show promising results in the field of clinical imaging (e.g., early diagnosis of Alzheimer from brain MRIs, classification of skin cancer), genomics or the classification of diseases based on computer vision tasks in skin research, its Challenges and Applications.

THE PINCHED NECK LIFT

Roger E. Amar • Spain

As we age, gravity causes the skin on the lower part of the face to sag, causing bruising of the jawline, the appearance of a double chin and laxity on the neck.

Dr. Roger Amar has been performing conventional neck lift and various types of face liftings with SMAS trimming for many years, but as his understanding of the ageing process has developed, he has constantly innovated new techniques and procedures that tackle the root cause of ageing, with procedures less invasive.

The last improvement developed on cadavers in 2010 is the lift of the Platysma muscle in the neck. It is possible now to separate this muscle from its SMAS insertion, holding it behind the ears to lift the whole area, and removing the neck bands by the contra-incision under the chin.

Good candidates for a Pinch Neck Lift procedure are those that have a degree of skin laxity in the area.

If there is some excess skin or fat, then this can also be excised during the same procedure.

First, Dr. Amar cuts a U-shaped incision around the earlobe, through which he can hold up a strip of SMAS and platysma muscle to restore the normal tension laterally. A double chin or tense platysma bands can also be tackled during the same precision by making a tiny incision just underneath the chin to release the platysma muscle.

In some cases, on important sagging on men, it is not necessary to make the ear ‘incisions. The submental fat is excised and the medial platysma bands extended through a z-plasty. It is called the ‘reverse Pinched Lif ting’.

These procedures are performed in theatre, under local anaesthetic with slight sedation. This is minimally invasive surgery so the patient can return home, fully recovered, the same day.

The follow up is uneventful and the stitches are removed in two sessions. The scars are inconspicuous and the patients show a high rate of satisfaction.

PAN-FACIAL REJUVENATION: THE LATEST TECHNIQUES

Dendy Engelman • USA

In the aesthetic rejuvenation of the face, the technique of merely ‘filling lines’ is an antiquated one that should be avoided. Novel approaches to pan-facial rejuvenation – including frontalis elevation, temple volume replacement, zygomatic volume restoration, mandibular support, and submental/ neck rejuvenation – will be introduced.

TONE, TIGHTNESS, TEXTURE: ADDRESSING YOUR PATIENTS’ CONCERNS IN TOTAL FACIAL AESTHETIC THERAPY

Michael H. Gold • USA

Increasingly effective technology is bringing a host of non-surgical options for facial rejuvenation to patients who are reliant or unable to take the downtime for invasive procedures.

Many devices and modalities only address one concern, but it is the comprehensive structure, appearance, and quality of the skin that needs to be considered for complete facial rejuvenation. Addressing the tone, tightness, and texture of the skin in one treatment has shown superior results compared to only treating skin with one modality alone.

TREATING FLACCIDITY ON THE NECK AND LOWER THIRD OF THE FACE USING RECOMBINANT ENZYMES

Susana Misticone • Venezuela

There are three PB serum recombinant enzymes: hyaluronidase, collagenase and lipase. They are obtained by genetic recombinant from bacteria. These come freeze-dried and can be used separately or in combinations (cocktails). Lipase acts by digesting triglycerides from adipocytes, collagenase digests collagen and hyaluronidase acts as a diffuser of the two previous ones by digesting polysaccharides from fibrous septa allowing them all to reach their substrates better and making their effect; by decreasing the size of the adipocytes and stimulating the production of new collagen, skin thinning and lifting is obtained. The cocktail is prepared according to the requirement of the patient. I will present my experiences of 2 years using it through injections for flaccidity of the neck and lower third of the face with very good results, observed 15 days after the injection and have a variable duration of months to years depending on the patient.
ACNE SCARS: COMBINATION TREATMENT WITH PICOSECOND LASER AND FILLER INJECTION
Peter Peng • Taiwan

Acne is one of the most common skin diseases seen in dermatological practices all over the world. In colored populations, acne scars and pigmented sequelae can affect more than 50% of the population.

The stimulatory filler can induce new collagen formation and improve skin texture and volume loss atrophic areas. The application of stimulatory filler over atrophic acne scars had been proved to be effective by some reports and the author’s clinical experience.

Clinically, the 755nm picosecond laser with focus lens can induce new collagen formation and is effective in Asian patients with acne scars, with a high safety profile even in dark skin types, and a high satisfaction rate.

In this session, I will present my experience about the combination of stimulatory filler and picosecond laser to treat atrophic acne scars in Asian.

Poly-L-lactic acid is then injected into the medial gluteal region at a dilution of 20 ml using a NERO cannula, which has a tapered tip that can also cut the fibrotic septa of cellulite.

This technique allows the treatment of cellulite and sagging in a single session, while also promoting buttock lift. The approach optimizes the patient’s time, providing the convenience of a single application.

PNEUMATIC TECHNIQUE PLATFORM TO PROMOTE KINETIC FACE AND NECK LIFT
Claudia Marçal • Brazil

This lecture demonstrates a new technique that promotes kinetic face lift through specific punctures applied to the epidermis, forehead region, zygomatic area, mandibular arch, SMAS region, temporal area, ocular and periorbital areas and anterior cervical area. This platform is an innovative system of pneumatic delivery using hyaluronic acid cross linked diluted in saline solution introduced by a high-pressure jet in the dermis with assertiveness. The procedure provokes microtraumas on the dermic structure, stimulating neoelastogenesis on a wide range, improving the thickness, elasticity and density, plus remodeling the contour of the face and the neck.

The parameters of the injection pressure and the applied filling can be adjusted according to each specific case, allowing a punctual introduction of the fluid via epidermis with minimal entry area. Immediately after the injection in the skin, a bump must be observed measuring 0.6 to 1cm in virtue of the hyaluronic acid spreading in a 1cm radial form, verifying that the technique was ministered efficiently.

According to my personal protocol, exposed in this lecture, the sum of all the treated points promotes indirect stimulation of SMAS and temporal fascia, leading to an increase of the circulation in these areas, bettering the tonus. Also, this technique causes a re-densification of the existing collagen, contributing to an immediate effect of firmness and elasticity.

The totality of the patients treated in my office with the pneumatic technique were submitted to two sessions, with an interval of 30 days and 10ml of a compound composed by 1ml of hyaluronic acid cross linked, 40 units of toxin botulinum and 8.2ml of saline solution was used.

In conclusion, it was possible to observe a new and modern technique, with no side effects, that promotes rejuvenation of the face and neck, mimicking a face and neck lift surgery, in only two sessions of a non-invasive procedure, that demands no down time. Comparing the clinical cases before and after, all the patients demonstrated satisfaction and the parameters of facial analysis and diagnostic systems demonstrated overall improvement of the treated area.

THE STARBURST BUTT LIFT TECHNIQUE
POLY-L-LACTIC ACID FOR THE GLUTEAL AREA: THE STARBURST BUTT LIFT TECHNIQUE
Maria Paula del Nero • Brazil

This lecture demonstrates a new technique that promotes kinetic face lift through specific punctures applied to the epidermis, forehead region, zygomatic area, mandibular arch, SMAS region, temporal area, ocular and periorbital areas and anterior cervical area. This platform is an innovative system of pneumatic delivery using hyaluronic acid cross linked diluted in saline solution introduced by a high-pressure jet in the dermis with assertiveness. The procedure provokes microtraumas on the dermic structure, stimulating neoelastogenesis on a wide range, improving the thickness, elasticity and density, plus remodeling the contour of the face and the neck.

The parameters of the injection pressure and the applied filling can be adjusted according to each specific case, allowing a punctual introduction of the fluid via epidermis with minimal entry area. Immediately after the injection in the skin, a bump must be observed measuring 0.6 to 1cm in virtue of the hyaluronic acid spreading in a 1cm radial form, verifying that the technique was ministered efficiently.

According to my personal protocol, exposed in this lecture, the sum of all the treated points promotes indirect stimulation of SMAS and temporal fascia, leading to an increase of the circulation in these areas, bettering the tonus. Also, this technique causes a re-densification of the existing collagen, contributing to an immediate effect of firmness and elasticity.

The totality of the patients treated in my office with the pneumatic technique were submitted to two sessions, with an interval of 30 days and 10ml of a compound composed by 1ml of hyaluronic acid cross linked, 40 units of toxin botulinum and 8.2ml of saline solution was used.

In conclusion, it was possible to observe a new and modern technique, with no side effects, that promotes rejuvenation of the face and neck, mimicking a face and neck lift surgery, in only two sessions of a non-invasive procedure, that demands no down time. Comparing the clinical cases before and after, all the patients demonstrated satisfaction and the parameters of facial analysis and diagnostic systems demonstrated overall improvement of the treated area.

HEAVY FACES: EFFECTIVE PROTOCOLS WITH EBD AND FILLERS
Antonina Gonskaya • Russia

The “heavy” face morphotype is predominant in the Slavic peoples. As a rule, these are the patients who require surgical correction, especially when the degree of ptosis is 3 and 4 according to Becker. In therapeutic correction, the most effective methods are with using combination of lasers, EBD and injections. We distinguish 2 subtypes of a “heavy” face morphotype with and without an excess of subcutaneous-fat pads. Different subtypes require different methods of correction and may differ when considering ‘first-choice’ methods. The main target layers for EBD and lasers are surface fat pads and ligaments with SMAS; for injection methods, the target areas are deep fat pads for fillers and muscles for botulinum toxins. The most effective EBD and lasers methods when working with this morphotype can be IFU, photothermal reconstruction using ER-Yag and Nd-Yag, as well as various RF-methods. The key area for using fillers can be found in the middle third of the face. When working with BTA, it is necessary to consider the peculiarities of this morphotype and the doses should be consequently reduced. When working with skin to select a method, the key issue is the presence or absence of excess skin. It is also necessary to consider the inconsistency of the microcirculation and the impaired lymphatic flow, which is characteristic of this morphotype and requires very careful use of damaging methods when working with the skin.

In conclusion, it was possible to observe a new and modern technique, with no side effects, that promotes rejuvenation of the face and neck, mimicking a face and neck lift surgery, in only two sessions of a non-invasive procedure, that demands no down time. Comparing the clinical cases before and after, all the patients demonstrated satisfaction and the parameters of facial analysis and diagnostic systems demonstrated overall improvement of the treated area.

MODERN PROTOCOLS IN INTEGRATED TREATMENT WITH LASERS
Ekaterina Pozdeeva • Russia

Face aging is a complex process which includes skin aging and structural aging, therefore correct correction is necessary.

It is necessary to work with the quality of the skin, then reduce the skin flap, increase the tone of the ligamentous apparatus and fill up the lost volumes.

But modern lifestyle dictates its own rules. Saving time is the main motto of the modern world! Modern people want everything done at once in just one visit to the beauty expert.

I decided to find out how effective simultaneous application of various procedures and treatments can be, find some patterns, understand the best order and time of application. I found a lot of research on this topic that I would like to present to you. Plus, my own pilot mini research on the application of contour plastic and laser procedures with short intervals. As an impact method, we chose ER laser and a special SMA module.

The conclusions of my research are as follows:

- After applying SMA-method, biodegradation of the filler is observed even with supraperiostal administration.
- There have been no complications during the implementation of the combined approach.
- No pronounced loss of volumes leading to deterioration of the clinical picture was marked.
- Satisfaction with the results of the correction of both doctors and patients has increased.

Studying this topic is not easy, because it all depends on:
- the type of filler and BTA
- depth of the placement of the injected product
- peculiarities of the physical and biological effects of the machine method and the depth of impact of the physical agent
- confirmation of safety and efficiency of each combination requires research
- further study and accumulation of reliable evidence base of the combined approach in correction is necessary.
SCIENTIFIC SESSIONS

KELOIDS, HETEROTROPHIC AND ATROTIC SCARS – WHAT’S NEW IN TREATMENT
TECHNOLOGIES
Olga Zabnerkova • Russia

INTRODUCTION
Scars are an inevitable and natural part of the healing process for most dermal wounds - they are a normal consequence of the body’s physiological healing response.

Most scars do not produce poor cosmetic or functional results. The original scar tissue is gradually replaced during the end phase of healing resulting in a reduction in redness, elevation and firm consistency of the tissue to produce a flat, soft, pale scar that is level with the adjacent skin.

If, however, the delicate balance is not achieved during the healing process, the resulting scar may display abnormalities. Such types of abnormal scars are hypertrophic, keloid and atrophic scars.

Various options are available for the treatment of keloid and hypertrophic scars including: surgical revision, laser surgery, steroid therapy, pressure garments, silicone gel sheets. BoTN in scar treatment is a new approach, which efficiently helps to reduce scar growing.

Chemical peels, laser resurfacing are most prevalent methods of treatment. Anyway new technique such as RF, subcision, filler & collagen injections can dramatically improve skin resurfacing.

MATERIAL
10 males & females with keloids & hypertrophic scars 25 females & males with postacne atrophic scars

CONCLUSION
BoTN is a new trend in keloid scars treatment. It efficiently helps to reduce growing and itching of keloids scars. Also can be used as a preventive methods for keloids formation.

RF technique is a new approach in postacne scars treatment. HA and collagen filler injections can be recommended for treatment deep atrophic scars.

LATERAL EYE REJUVENATION WITH THREADS, TOXIN AND FILLERS
Ibrahim Ashyari • Saudi Arabia

YES are windows to one’s soul. One of the regions that shows first the signs of aging is the periorbicular area. It includes, static and dynamic rhytids as well as subcutaneous volume loss. The complex anatomy and dynamic underlying muscles of facial expression make this region particularly difficult to treat. Botulinum toxins and fillers, especially when used in combination, offer an excellent approach to minimally invasive rejuvenation of this area.

The periorbital region is particularly vulnerable to the effects of aging. For one, eyelid skin is among the thinnest in the body, at around 0.3-0.5 mm. It lacks underlying subcutaneous fat to mitigate the contour defects and fat prolapse attendant with age. The delicate nature of this tissue also readily transmits underlying pigments, including blood products, muscle, and vessels.

Less collagen and elastin than surrounding skin, rendering periorbital skin less resilient and prone to early rhytid formation. In addition, eyelid and periorbicular skin is dynamic and subject to constant tension from the surrounding muscles of facial expression including the orbicularis oculi, corrugators, and procerus, which likely accelerate rhytid development. Moreover, the sun, various extrinsic and environmental factors also contribute to the development of aging in this region.

Methods used to improve this area includes surgery (i.e., blepharoplasty, brow lift with threads or surgery), injectables (botulinum toxin, dermal fillers), laser resurfacing and photo-rejuvenation, and topical therapy. The aim of rejuvenation is to specifically focus on the techniques and indications for use of toxins and fillers in the periorbicular region in order to prevent or lessen the signs of aging in this area.

EYE BAGS: INJECT OR SURGERY? CONSIDERATIONS AND INJECTION TECHNIQUES
Peter Peng • Taiwan

The tear trough is one of the most commonly requested areas for treatment among Asian patients, yet it is also one of the most challenging to treat via fillers. In addition to tear troughs, many patients will also present with eye bags (pseudoherniation of infraorbital fat), which significantly complicates treatment, especially with minimal-invasive approaches.

Several factors contribute to the formation of eye bags, including tear troughs, laxity of the orbicularis oculi muscle and lower eyelid skin, and lack of support from the malar and deep cheek fat pads. While severe cases often require surgical intervention, minimal-invasive procedures are commonly requested as well.

The treatment for severe eye bags formation usually requires surgical intervention. However, there are a lot of requests for nonsurgical treatments for eye bags.

In this presentation, I will focus on evaluation of the tear

SCIENTIFIC SESSIONS

RHINOFillER FOR NON-SURGICAL NOSE CORRECTION: STEP BY STEP TECHNIQUE
Maurizio Berlanda • Italy

INTRODUCTION, AIM OF THE WORK
The non-surgical nose correction by Hialuronic Acid injection has become popular and frequently performed but not all patients are good candidates for this procedure. Author describes guidelines to optimize results.

MATERIAL AND METHODS
Ideal Hialuronic Acid needs to be high G prime, high density, injected caudo-cranial direction, as by needle as by cannula.

RESULTS
Following correct injection technique results are positive, lasting about 6 months, with patient satisfaction.

CONCLUSION
Rhinofiller in selected patients, is an effective technique as for primary profile correction as after not perfect surgical procedure.

PERIORBITAL DARK CIRCLES: WHAT TO DO?
Susana Misticone • Venezuela

Periorbital dark circles are a very frequent reason for consultation in the dermatological practices with not many effective treatments. I present my experience using hyaluronic acid fillers with cannulas to treat the sinking in combination of fractional Q-Switched laser to treat the darkening of the area with very good results.

SHAPING THE LUMPY BUMPY NOSE: THE HOW, WHEN AND WHY OF USING ABLATIVE LASERS
Ganesh S. Pai • India

Multiple lasers and devices form the mainstay of management of acne scars and rhinophyma. Scars vary in nature and size, from boxcar, atrophic, ice-pick and rolling scars. Remodeling of dermal scar tissue needs a different set of lasers depending on extent of scarring, size of pits, age of the patient and Fitzpatrick type of colour of skin. Greater density and energy are applied to thick contracted and fibrotic scars while minimal density and energy are used on soft and superficial scars. The bugbear of the post inflammatory hyperpigmentation is inevitable in skin of colour and managed with sunscreens and skin lightening agents.

There are multiple lasers and radiofrequency devices to manage acne scars & rhinophyma. Their use differ according to the nature of the scar. Optimising scar therapy depends on choice of wavelength and sequence of application. For example, a novel way to treat a deeper pit is to pass fractional CO2 energy into the base of the scar. 8 weeks later, the crater of the pit is filled with chondroitin sulphate and a 4mm erbium laser is used to bring down the shoulder of the scar to the level of the base.

Conversely if it is a hypertrophic nodular nasal scar, there is the option of ablatting with a fractional CO2, or a 4mm aperturate erbium laser. With a fractional CO2, the density and the energy have to be fifty per cent higher than that applied to box, ice pick and rolling scars, as the intention is to ablate the scar and not stimulate new collagenosis.

The ability to control the depth of ablation is superior with the erbium laser as visibility is high, whereas predictability of the depth is uncertain with the CO2 laser.

Aggressive parameters on a hypertrophic scar may give rise to a depressed scar. The hypertrophic tissues of rhinophymas are best ablated by fractional CO2. The vascularities of the structures would require adrenaline-soaked gauze to control oozing of blood.

The lumpy bumpy nose can be reshaped successfully without plastic surgery.

SATURDAY • AUGUST 31, 2019
through, considerations between surgery and injection, and simulate possible results achievable through filler injection. I will also discuss a guide for treating tear troughs and eye bags with injectables.

**MATERIAL AND METHODS**

The study included ten Caucasian women aged 30 to 65 years, with Glagau scale grade 2 or higher, mild/moderate facial ptosis, mild/moderate cervical-facial ptosis, in the months of September 2018–January 2019. For the treatment, the following were used in the same session on a sequential basis: filler with cross-linked hyaluronic acid 20 mg/ml and 25 mg/ml, at a dose of 1 to 2 ml injected in the deep dermis as multiple injections following the vectors marked; microdoses of about 0.02 to 0.04 cc were applied per injection point, subsequently applying by mesotherapy with the nappage technique 5 ml of active ingredients based on organic silicon, vitamin C, non-cross-linked sodium hyaluronate at a concentration of 2.5 mg/ml and polynucleotides. In the second and third treatment sessions, mesotherapy was applied using the same technique and products.

Safety was evaluated in each session and 15 days after the control session. Efficacy was evaluated at two control visits (after two sessions and two weeks after the end of treatment) by photography, satisfaction survey and using a cutometer™ probe (Courage – Khazaka Electronic).

**RESULTS**

After one treatment session plus one control session with cross-linked hyaluronic acid filler plus mesotherapy, it was concluded that skin elasticity improved up to 19.3%, and firmness up to 25.4%. In both, 85% of the volunteers evidenced a clear improvement in fine wrinkles and skin hydration.

**CONCLUSIONS**

The combination of the technique of filler with cross-linked hyaluronic acid and mesotherapy sequentially in the same session has been shown to be safe and effective, as a clear quality improvement was seen in the skin treated, while no unexpected side effects were seen.

**PERORBITAL REJUVENATION: FILLERS, BTX AND EBD FOR THE OPTIMAL RESULTS**

Ekaterina Gutop • Russia

Individual variations in the eye region, aesthetic problems and anatomical characteristics should be considered when planning the treatment in the safest and most efficient way.

Treatment with BTX is one of the most frequently used in aesthetic practice. Individually in points, doses and correction technique should be based on the individual peculiarities of the muscles and their activity.

By treatment with fillers, improvement in volumes and contours should be obtained. Fillers with low hyaluronic acid characteristics and cannula injection technique are preferable for the safe correction in periorbital area.

By EBD, such as minimally invasive RF, tightening and contraction of the skin, renovation of ligaments and improvement in fat compartments can be achieved in individual treatment protocols.

Best results can be obtained by using BTX, fillers and minimally invasive RF treatment in combination in stages.

**COMBINATION THERAPIES AND MEDICAL SHAPING FOR THE EYEBROWS**

Songa Satther • Germany

A trend of shaping, filling and tattooing eyebrows has reached the whole world. The eyebrow style has become an aesthetic movement like hair style and hair colors. Looking into the history styles change over decades and changes are already programmed for the future also for eyebrows.

Our patients are consulting in for eyebrow reasons usually first non-doctors (aesthetic/ permanent makeup artists etc.) and we doctors are then facing their complications. As an aesthetic doctor you should not only know how to correct these complications but also know what we can offer as safe treatments to our patients for their eyebrow style in a safe way. Different techniques and treatment options will be discussed.

**IS PROPHYLAXIS BETTER THAN REGENERATION? KEEPING A BEAUTIFUL SKIN IN YOUNG PATIENTS**

Sonja Sattler • Germany

Over decades the treatment approach for aesthetic reasons usually has been regeneration, turning back what has been lost during the aging process.

Today we are facing a young generation living in a world of picture taking with a high focus on a beautiful face with beautiful skin. We are now treating young patients with a more prophylactic approach than a regenerative approach. In this lecture treatment options for topicals as well as minimal invasive filler treatments with filler will be discussed for this patient group.
Cellulite is an all over problem for many female patients worldwide. The discussion if cellulite is a disease or only a genetic circumstance of life based skin condition in female is ongoing. The unknown pathophysiology and the difficulty in describing the different severities of cellulite show the uncertainties doctors are facing in treating cellulite.

In this lecture new anatomical findings and treatment options for smoothing out of irregularities in cellulite will be described. The nowadays most common possibilities to treat cellulite are energy-based devices, collagen stimulators as well as the standardized guided subcision technique will be described. Latest data on long lasting results will be shared.

Treatment results will be shown and when to use which treatment option will be discussed.
Delaayed type hypersensitivity reactions secondar -y to HA-based dermal fillers can be classified ac -cording to the time of appearance post-procedure and may present as discolouration, nodules, solid edema and disfiguration. Our study aimed to assess the knowledge and experience regarding the management of late-onset procedural complications among physicians in Israel who inject HA-based dermal fillers. The heterogenic and incorrect approach regarding the management of delay -ed type reactions to HA-base filler injections, reflected in our study, illustrates the existing ambivalence in current literature regarding the management and therapy of late onset complications. Following the study an international panel of experts united to discuss and challenge the de -finition, incidence and management of these reactions and in order to offer a clear approach upon encountering these complications.

HOW TO TRAIN YOUR STAFF FOR MANAGING COMPLICATIONS
Beatriz Beltran • Spain

A thorough understanding of the Complications, early identification and acute response, decreases the risk of long term sequelae. Our Staff has to be well trai -ned in case of having a complication. They are the first person who receive calls phones and it is mandatory to be well trained to select and detect when it is a compli -cation.

I will explain how to train your Staff in the best way for in -volving in our Job and helping to manage complications.

Guidelines to avoid, identify and manage different Com -plications will be explain.

COMPLICATIONS IN CONTOUR PLASTY: METHODS OF TREATMENT AND PREVENTION
Albina Kajaia • Georgia

INTRODUCTION
Procedures using fillers is the most popular around the world for more than 30 years. It’s confirmed by the re -sults of the annual statistics ISAPS. According to The International Study on Aesthetic/Cosmetic Procedures Performed 2016, procedures using hyaluronic acid are on the second place (25.5%) after Botulinumtoxin injections (37.3%) in accordance to popularity. The same statis -tics shows, that the following injection materials are fre -quently used: 1. Hyaluronic acid (3,372,445 performed procedures and 18% increase compared to 2015); 2. Poly-L-Lactic acid (79,664, which is 7% more than in 2015); 3. Calcium Hydroxyapatite (164,911, compared to 2015 the number of procedures decreased by 10%).

A stable increase in the number of procedures (compared to 2015 and 2016) is an indicator of the popularity of this technique, both among doctors and patients. Howe -ver, along with the increased demand for injectable fillers, doctors increasingly disregard the recommendations of manufacturers: they use unregistered drugs and gels of unknown origin, inject fillers into the “off-label” zones. All these factors inevitably lead to an increase in the number of complications.

MATERIALS AND METHODS
Our clinic “Total Charm” (Tbilisi, Georgia) is the leading one in the country, that’s why patients are sent to us in all complicated cases. In the period between 2015 and mid-2018, we got patients with the following complicati -ons associated with injections of fillers:

Hyaluronic acid (HA) - more than 37 people;
Calcium hydroxyapatite - 4;
Permanent implants (Silicone, PAAQ) - 29;
Vitamin E - 12;
Implants of unknown origin - 12.

RESULTS
The following complications were mostly observed:

Hyper-correction (more than 55%);
Granulomas (20%);
Puffiness at the injection site (5%);
 necrosis and embolism (3%);
 infection (5%).

DISCUSSION
Depending on the origin of the implant, patients under -went therapy and surgical treatment, where it was ne-

cessary. The complications occurred after using HA im -plants, better responded to treatment and the results largely depended on the presence of the antidote-hyal -uronidase. For the rest of the drugs: partially degraded passed into the stage of remission, and non-destroctible ones were subjected to surgical treatment.

CONCLUSION
To prevent complications after introducing fillers, impor -tant to use only certified products, including biodegrade -ble products based on hyaluronic acid and apply only the methods recommended by manufacturers. In case of complications, necessary measures should be taken urgently to eliminate them.

UPDATE ON INJECTABLE NECROSIS AND BLINDNESS
Ramtin Kassir • USA

Injecetable necrosis and blindness secondary to filler treatments are rare but catastrophic complications of soft tissue augmentation with filler agents. They usually occur as a result of injection of filler directly into an artery; they can also result from compression or injury.

In 2016, 58 published cases of blindness after filler injec -tion were reported and another 48 have been reported since then.

All facial filler treatments carry some risk of vascular ad -verse events (AEs). There are no safe zones on the face, only higher and lower risk areas. The highest risk sites are the nasal region, glabella, forehead, and nasolabial fold. Hyaluronic acid filler was the cause of this compli -cation in the majority of cases. Vision loss, pain, ophthal -moplegia, and ptosis were the most common reported symptoms. Skin changes and central nervous system complications have also occurred. Less than 20% had complete recovery of vision. Management strategies varied greatly and there were no treatments that were shown to be consistently successful.

Although the risk of blindness from fillers is rare, practitio -ners who inject filler should have a thorough knowledge of this complication including prevention and manage -ment strategies. In order to avoid serious, potentially irrecoverable complications, all physicians should ideally avoid high risk areas such as the nose, glabella, forehead and nasolabial folds and have a heightened awareness of the possibility of vascular compromise when using fil -lers. They should specifically look for a regional blanch, sudden loss of vision, and have an established treatment algorithm in place if a blanch is suspected or loss of vision occur. In these circumstances, retrobulbar injections of hyaluronidase may help but have not been consistently effective.

ACNE SCARS, LASERS & EBDS, FILLERS & TOXINS: WHEN, WHY, WHERE? FOR WHICH COMBINATION?
Hugues Cartier • France

BACKGROUND
Each scar type has a different structural cause warrant -ing a customized approach. Many cosmetic op -tions exist to address these changes individually, but little literature exists about the safety and efficacy of combi -ning such procedures and devices as hyaluronic acid, botulinum toxin and laser.

METHODS
A Medline search was performed on combination treat -ments because it relates, and results are summarized in a personal practical application for these combina -tions of procedures are also discussed.

CONCLUSION
Review of the literature revealed multiple single options for scar treatment with minimal evidence in the literatu -re found on the safety and efficacy of combining such procedures and devices. The authors’ experience is that combing treatment techniques can be performed sa -fely and synergistically with optimal patient outcomes.

ACNE, ACNE SCARS AND PHOTOBIO-MODULATION
Christine Noe • France

Photobiomodulation (PBM) with LED and / or LLLT is based on the interaction of some wavelengths of the visible and IR spectrum with cellular receptors. By im -pacting cellular metabolism, it causes anti-inflammatory, immunoregulatory effects, and can affect cell differentia -tion and / or proliferation.

PBM is an innovative approach in the management of acne and its effectiveness is demonstrated. Since the 2000s, numerous publications provided strong argu -ments in favor of this treatment and also made possible
to specify the protocols to be favored. Studies show that the combination of red and blue wavelengths is synergistic and that this choice should be preferred because it allows the elimination of about 75% of inflammatory lesions. A more recent publication concludes at a level B recommendation. The severe inflammatory and relapsing acne constitutes the best indication of PBM. The development of home-use devices that seems to be as effective as medical LEDs could change our habits in managing patients with acne. LEDs can also be combined with photosensitizing gels for dynamic phototheraphy with interesting results.

The remodeling effects of PBM improve scars and can be used even (and especially) during progressive outbreaks. PBM also reduces the discomfort of aggressive procedures: laser peels, radiofrequency and corrective surgery while improving their effectiveness. The parameters are those used in ‘skin repair’.

The place of LEDs within the therapeutic arsenal of acne remains to be defined but it is obvious that there is sufficient levels of proof to propose this treatment in the same way as the more conventional therapies with a beneficial effect on inflammatory attacks but also on hyper-secrétion and scars. LEDs are also an effective and safe alternative in cases of contraindications to allopathic treatments, especially pregnant women or patients who are reluctant to conventional treatment.

**SURGICAL TREATMENT OF ACNE SCARS**

Khâled Tourki • Tunisia

**INTRODUCTION**

Before treatment with energy-based device (EBD) depressed or atrophic acne scars, surgical treatment is often required.

**THE CONSULTATION FOR ACNE SCARS**

It is necessary to have the history of the disease and the patient (herpes, keloid).

One must evaluate the psychological stability of the patient, its objectives and the expected results.

Also we need to know the last oral treatments as: isotretinoin, cyclines, or others.

A careful examination of the scars will help to classify the different types of atrophic scars. It will eliminate hypertrophic scars or keloids.

- **Cicatrices** scars are secondary to rolled follicular ostia.
- **W** scars are depressions associated with post-inflammatory atrophy of the adipose panniculus (steato-necrosis).
- **U** shaped scars are depressed scars with a cookie cutter.

**MANY INTERVENTIONAL TREATMENTS ARE OFFERED INCLUDING**

- Subcision is a subcutaneous incision with a sharp bevel needle. It is done under local or loco-regional anesthesia. With the aid of a punch of diameter greater than the scar size, there is a cutaneous cylinder which will be fixed conventionally by the coagulum. At best we will put a suture transfusing the dermis of the cutaneous cylinder and play the role of leverage. This improved technique avoids the possibility of failure and secondary retraction that can be seen with the conventional technique.

**CONCLUSION**

The correction of acne scars is not just about lasers. Let’s not forget our crafty, clever and efficient methods, which allow us to optimize our laser techniques.

---

**GSAAAM & ESAAM INTERNATIONAL ANTI-AGING SYMPOSIUM**

**CLINICAL STUDY EFFECT OF DNA PEPTIDE ON LENGTH OF TELOMERES**

Ghislaine Beilin • France

DNA Peptide have shown effect on longevity and can even recover damaged DNA.

Professor Vladimir KHAVINSON has already demonstrated in immunofluorescence DNA repair using DNA Peptide.

We performed a preliminary biological study on Index Telomere with CERBA PASTEUR BIOPREDIX laboratory to evaluate the incidence of an oral complex of fish DNA gonadal Peptide on Telomere.

Comparing with all the previous published studies and clinical results, the purpose of this preliminary study, we can conclude that Telomere Index is a biological indicator of age and has to be tested in our biological evaluation of age.

**PREJUVENATION**

Ghislaine Beilin • France

Evolution of the society, development of safe, technological in aesthetic medicine and new knowledge on genes and anti-aging have increased the number of procedures for patients more and more young.

We can already offer to our elderly women and men protocols that not only slowdown aging but stop aging, and even reverse time.

On young patients Millennial Generation, we actually do protocol to prevent skin, body, collagen and genes aging.

This is the new concept of Prejuvenation.

**THE YIN AND YANG OF THE INFLAMMATORY REACTION**

Patrizia Anna D’Alessio • France

Inflammation, the most ancient mechanism involved in species survival has shaped our direct contact with the environment. While inflammatory episodes resolve and allow a return to homeostasis, the basic immuno-surveillance takes over the relay, thus reducing further noisy encounters with the environment. Nonetheless, in our contemporary society, inflammation with its five signs: calor, dolor, rubor, tumor, functio lesa, has changed - with the disappearance of the majority of strictly physical or infectious constraints - into a chronic phenomenon that we now call low grade inflammation or silent inflammation whose characteristic aspect instead relies in its chronicity.

Yet inflammation has its virtues, including restoration. Indeed, a + good inflammation, + functioning as a punctual warning system, alternates with a chronic + inflammation, the consequences of which, over time, will result in a profound dysregulation of all the body systems, digestive, cardio-metabolic, neuronal ... even replicative senescence. In chronic inflammation the secretary phenotype, SASP, of senescent cells will be privileged, maintaining dysfunctions and paving the way to increasing organ failure. Chronic inflammation is also an intimate ally of any cancer. These two aspects of chronic inflammation, are constantly overlapping.

Moreover, the major trigger of inflammation is stress, and its major antioxidant is endogenous cortisol release. In response, the brain recognizes itself first to calm down by setting up a rewarding mechanism by increasing the secretion of dopamine, a neurotransmitter produced by the brain, intestine and certain strains of microbiota. In a second stage, certain brain pathways connecting to the periphery are activated and adrenal glands are stimulated to pour into circulation the powerful anti-inflammatory hormone cortisol. For a while, any inflammatory reaction is thus controlled. However, if the stress persists, this hyper-cortisolism will have deleterious effects especially on the intestinal barrier. In short, when over-stimulated, the anti-inflammatory hormone eventually produces chronic inflammation.

Indeed, today a lot of research indicates that a continuous inflammatory state accelerates cells senescence, under the influence of cortisol. From + leaky gut + to + sickness disease + inflammation has knocked out the individual resulting in + chronic fatigue syndromes, depression, anxiety, sleeplessness and + burn-outs.+

But even in its chronic version, inflammation can be addressed, removing its major detrimental side effects, through repair of the gut barrier and conversion of reactive stress to a stimulating experience instead of iatrogenic hijacking. Nutragenics and the development of body awareness are thereby probably the major epigenetic regulators.

**TELOMERE BIOLOGY: THE KEY TO LONGEVITY?**

Bernd Kleine-Gunk • Germany

If you want to treat aging, you first have to understand the aging process. Many “Hallmarks of Ageing” have been identified during the recent years, among them are oxidative stress, low level inflammation and glycation. However – the shortening of telomeres seems to be of special importance. Telomeres really work as “biological clocks” in each and every of our cells. Their length is a valid marker of biological age. By stimulating the enzyme telomerase, we even have the opportunity to restore telomere length and “rewinding our biological clock”.

While reducing oxidative or inflammatory stress or avoiding glycation is mainly “preventive medicine”, restoring the telomere length with the help of telomerase activators really is a step into the new area of “regenerative medicine”.

---

**SUNDAY • SEPTEMBER 1, 2019**
Faith in the doctor
Hope that the treatment can work
Charity with himself to accept the compliance of a hard and prolonged treatment

Personally, this is the focus that I use with my patients that usually come to me looking for an expert. My treatment can be prescribed by any dermatologist, but it could be difficult to obtain nice results without following the recommendations mentioned previously.

What is the basic treatment for me? Taking it as a starting point, the treatments must suit the patient and not only the illness.

I personally manage the following:
- Tacrolimus
- Topical keloid
- Oral antioxidants
- UVB-NB or Sun light

The safety and efficacy of the non-ablative fractional Lasers in stretch marks and scars treatment have been described in several studies and clinical trials. The Nd:YAP Laser, 1,540-nm is a promising wavelength which has been extensively used in Brazil on the treatment of scars and stretch marks. It is an non-ablative fractionated Laser able to deeply penetrate into the tissue — up to nine times more when compared to more traditional technologies such as the Er:Glass 1,540-nm wavelength.

Dr. Campos will present the 10-year results and detailed guidelines for Nd:YAP 1,340-nm LASER in the treatment of striae and scars.

### SKIN TIGHTENING AND BODY CONTOURING WITH NEW HIFEM TRANSFORMERS

Klaus Fritz • Germany

Due to its high efficiency and safety various technologies of heating biological tissue are broadly practiced in the dermatological field for various aesthetic applications, including skin tightening, skin lifting, body contouring and cellulite reduction. In body contouring radiofrequency, Lasers and High intensity ultrasound play an increasing role in heating the dermis.

Both — ultrasound and RF are being used as a single technology or in combinations in order to achieve sufficient heating of the dermis. HIFEM is now available in a few devices with transponders that allow a penetration as deep as 13 mm.

The 15% overlapping is important to obtain uniform results and telangiectasia of patients with rosacea. Also, patients claim to improve texture, shine and seborrhea. In Rosacea, which presents papules and pustules, rapid resolution alternatives are sought. Patients with rosacea, particularly the erythematotelangiectatic form, are considere good candidates for treatment with lasers and light therapies. Oxidation in the blood absorbs light from lasers at wavelengths of 595 nm (pulsed dye laser) and 532 nm (KTP laser), creating heat that destroys capillaries that contribute to the appearance of rosacea. Over a period of 3-4 weeks, the vessels are resorbed, and facial redness diminishes. Double-fiber Intense pulsed light (IPL) is another modality for treating rosacea. As with lasers, the mode of action is heating of certain structures and chromophores, causing their destruction and resorption, but unlike lasers, IPL output is broad spectrum and can be modified using filters. With IPL, the endpoint is transient purpura change, just a fleeting period of some black and blue, or vessel clearance. With IPL, too much pressure can compress vessels and blanch the skin, resulting in a less effective treatment. If it noted tissue graying, whitening, or contraction, could indicates overly aggressive treatment, with the risk of scarring. The 15% overlapping is important to obtain uniform results. In this presentation will show several techniques and tips of the IPL for rosaces treatment. This procedure significantly reduces erythema and telangiectasia of rosacea patients.
INNOVATIVE ACNE SCAR TREATMENT WITH 755NM PICOSECOND LASER COMBINED WITH INJECTABLE POLY-L-LACTIC ACID
Hui-Wen Cheng • Taiwan

Acne scar is a common disorder encountered in dermatological practice. Different scar types in one area make it difficult to treat in one way. Prolonged recovery time also make patients hesitate about the treatment. Combination with 755nm Picoscopic laser and Poly-L-Lactic acid in a holistic approach and treatment technique make the treatment of acne scar more elegant and leisurely.

HOW TO OPTIMIZE COMBINED TREATMENT EFFECTS OF FACIAL SKIN TIGHTENING WITH INJECTABLES BY AGE SEGMENTATION
Wei-Chih Ko • Taiwan

Facial aging is a dynamic process involving the aging of soft-tissue and even bony structures. Epidermal thinning and the decrease in collagen and elastin cause skin to lose its elasticity. Fat atrophy, coupled with gravity and muscle over-contraction, leads to wrinkling and the formation of dynamic and static lines. These factors contribute to the formation of facial folds and the sagging appearance of aged facial skin.

To reverse the aging signs, the rejuvenation strategies should be made according to the target signs. Combination therapy of injectables and non-invasive skin tightening devices offer satisfactory results and acceptable downtime. During the talk, I will share the tools and tips of this combination therapy by age segmentation.

TREATING MULTIPLE SKIN PROBLEMS IN THE SAME VISIT: COMBINING PICOSECOND LASER AND PULSED DYE LASER FOR OPTIMAL RESULTS IN ASIANS
Wei-Chih Ko • Taiwan

Picoscopic laser system intended to treat skin conditions with high pulse energy and extremely short duration in the range of 300-500 picoseconds (ps). The device is capable of operation at 1064 nm, 532 nm and 785 nm wavelengths.

As we know, USA and Taiwan FDA have approved the indications for picosecond laser systems as follows: tattoos, benign pigmented lesions removal, wrinkles, and acne scars. With the advent of picosecond laser pulses, it is now possible to safely generate laser induced optical breakdown (LIOB) in tissues, leading to a novel approach to facial rejuvenation that has little to no downtime and greatly reduced risk for complications.

Pulsed dye laser (PDL) has been successfully used to treat vascular conditions for years. It is regarded as the standard treatment for vascular and erythematous lesions, such as port wine stain, rosacea, red acne scar and unilateral neovoid telangiectasia by targeting underlying feeding vessels.

In my daily practice, I encounter many patients who suffer from multiple skin problems, such as pigmented and erythematous lesions. In my speech, I will share my personal experiences in combination treatments and tips for lowering side effects and maximizing patients’ satisfaction.

HISTOLOGICAL STUDY OF THE PICOSECOND LASER, AND ITS IMPLICATION IN THE TREATMENT OF MELASMA
Jeng-Hsien Lin • Taiwan

Melasma is a troublesome pigmentedary disorder because of its frequent recurrence and resistance to treatment. Multiple possible pathomechanisms were proposed in many studies. Some topical and oral medications as well as some energy-based devices are used to treat melasma.

The picosecond laser is a novel treatment modality for tattoo removal. The short pulse duration in the picosecond domain makes it exert more photomechanical than photothermal effect, resulting in stronger power to fracture the pigment with less chance of side effects such as post-inflammatory hyperpigmentation.

The picosecond lasers have been used to treat melasma in some studies. However, there is no universal protocol to treat melasma perfectly. By the way, there has been no detailed histological study of the picosecond laser to optimize the parameters for melasma.

We did an in vivo histological study of the fractional 532nm and 1064nm handpieces with serial fluences. In 532nm wavelength, there is a threshold above which laser-induced optical breakdown (LIOB) can take place. Below this threshold, only condensed nuclei with perinuclear halo were observed in some keratinocytes, without any cavitation. On the other hand, biopsies of 1064nm wavelength showed that LIOB can take place at very low fluence.

The occurrence of LIOB means there is rupture of the keratinocytes, and the melanin in the keratinocytes then has the possibility of dropping into the dermis through the defective basement membrane, which is one of the pathomechanism of melasma. The possible melanin in-continence can then make melasma worsened.

We suggest that the use of fractional 532nm beam in the sub-LIOB range is beneficial for the treatment of melasma. Higher fluence above the LIOB threshold may have higher chance of worsening of melasma.

TREATMENT OF FACIAL ERYTHEMA OF ERYTHROTELANGIETIC ROSACEA BY A NOVEL 585NM FRACTIONAL YELLOW LASER
Jeng-Hsien Lin • Taiwan

Rosacea is a facial skin disorder characterized by central facial erythema, which can fluctuate in intensity, telangiectasia, and in some cases papulopustular lesions and/or phymas. It poses heavy psychological burden on patients’ self-esteem, and may give rise to possible social withdrawal.

Besides traditional treatment, new medications such as topical ivermectin can handle papulopustular rosacea very well. However, facial erythema is still a very difficult problem to cope with, and topical brimonidine gel and oxymetazoline cream can only control the erythema temporarily for less than 12 hours.

Vascular lasers such as 585nm and 595nm pulsed dye lasers have been used to treat facial erythema of rosacea. The treatment endpoint has, for less downtime, evolved from purpuric to sub-purpuric by longer pulse duration.

We used a novel solid state 585nm laser to treat facial erythema of rosacea. The fractional technology allows slow heating of the blood vessels far beyond the thermal relaxation time, without causing purpura.

The pain during treatment and the downtime were both minimal. Gradual improvement of facial erythema, together with less episodes of flushing, was observed after several sessions. There was no exacerbation of rosacea symptoms, post-inflammatory hyperpigmentation, or scarring after treatment. Patients were all satisfied with the results.

In conclusion, the novel 585nm fractional yellow laser can treat the facial erythema and flushing of erythroleangiectatic rosacea with good results, almost no downtime, and no purpura.

NEW HORIZON OF FILLER INJECTION: MYOMODULATION
Peter Peng • Taiwan

Injectables are very popular since more than one decade ago due to its immediate and long-lasting results, minimal invasive and limited downtime. Recently, injectable fillers not only limited to volumization but also show some reshaping, “lifting” and skin rejuvenation and hydration effects.

In the past, if we want to modify the muscle activity, especially the facial muscle activity, we had to injection botulinum toxin to reduce to hyperactive muscle activity. We do not have methods to increase muscle activity.

After injection of filler such as hyaluronic acid (HA), the hypothesis of modification muscle activity (myomodulation) effects identified recently. This approach can inhibit or enhance the muscle activity by placement of the filler above, inside or below the specific facial muscles.

I will introduce this recent emerge new concept and its clinical implications and potentials.


Filler Injection.
INTRODUCTION

The bibliography on the treatment of scars by laser is very rich.

We work on a pilot Korean study, which compares the effectiveness of non-ablative fractional laser and ablative fractional laser in the prevention of thyroidectomy scars. This is a comparative study between a non-ablative 1550 nm and ablative fractional laser 2940 nm on a series of seven recent thyroidectomy scar patients.

The scar is improved by both types of laser. They also noted the superiority of the ablative one. The remodeling effect by fractional lasers improves cicatricial quality. Two mechanisms are suggested: Decreased cytokine and growth factors secretion, which prevents the formation of excessive scar tissue.

SELECTION OF PATIENTS

20 patients of all skin types with:
- Recent surgical scars (Day 10 to Day 15)
- Old scars recovered surgically
- After removal of tumors

PROTOCOL

- Fractional CO₂: 2 sessions 15 days a part
- In heating mode: low power and long exposure time 1.30mj / MTZ (10w - 3ms) to 45mj / MTZ (15w - 3ms)
- 0.8mm spacing (25% to 30%)
- Prescription of a healing cream or silicone gel
- Clinical surveillance and assessment of results: at 4months, 6months and 1 year
- Photographic surveillance: 4 months, 6 months, 1 year.

RESULTS: HARD TO QUANTIFY

- at 4months: obvious improvement in all patients
- at 6months: 70% to 90% improvement in 15 patients
- at 1 year: the scar continues to improve but less clear than the first 6 months. It is remarkable in all patients

CONCLUSION

The aesthetic results are very satisfactory in the early management of surgical wounds by the laser. It is imperative to forget the misconceptions: use the laser at least 6 to 12 months after surgery!