

# Achievements of modern aesthetic medicine as seen from the perspective of “20th World Congress of Aesthetic Medicine in Miami”

## Osiągnięcia współczesnej medycyny estetycznej widziane z perspektywy „20th World Congress of Aesthetic Medicine in Miami”

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Osiągnięcia współczesnej medycyny estetycznej są coraz bardziej spektakularne. Poza tym medycyna estetyczna przykuwa uwagę mas mediów. Dlatego w artykule przedstawiono osiągnięcia współczesnej medycyny estetycznej widziane z perspektywy „20th World Congress of Aesthetic Medicine”.

„American Academy of Aesthetic Medicine and Union Internationale de Medecine Esthetique”, zorganizowały w Miami na Florydzie (USA) w dniach 12-15 listopada 2015 r. 20. Światowy Kongres Medycyny Estetycznej. W Kongresie wzięło udział 78 prelegentów z całego świata. Zaprezentowano wiele badań z zakresu medycyny estetycznej i przeciwstarzeniowej. W poniższej pracy przedstawiono kilka szczególnie istotnych. Międzynarodowe i światowe kongresy są zdarzeniami, gdzie lekarze z całego świata wzajemnie się poznają i chętnie dzielą się swoimi przemyśleniami na temat najnowszych osiągnięć w określonej dziedzinie medycyny – co wpływa bardzo korzystnie na podniesienie jakości opieki zdrowotnej.

**Słowa kluczowe:** medycyna estetyczna, medycyna przeciwstarzeniowa, raport z kongresu

Achievements of modern aesthetic medicine are becoming increasingly spectacular: Aesthetic medicine attracts the attention of the mass media. The article presents the achievements of modern aesthetic medicine as seen from the perspective of the “20th World Congress of Aesthetic Medicine”.

Between 12-15th of November 2015, the American Academy of Aesthetic Medicine and Union Internationale de Medecine Esthetique organized a congress on aesthetic and anti-aging medicine in Miami, Florida, US. It was the “20th World Congress of Aesthetic Medicine”, with 78 speakers from all over the world, presenting a lot of research in the field of aesthetic and anti-aging medicine. This article presents some of them. International and world congresses are the events where doctors from around the world can meet and share their thoughts on the latest achievements in a particular field of medicine – with a very positive influence on improving the quality of health care.

**Key words:** aesthetic medicine, cosmetic medicine, anti-aging medicine, the congress report

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### Introduction

Between 12-15<sup>th</sup> of November 2015 the American Academy of Aesthetic Medicine (President of AAAM – Dr. Michel Delune) and Union Internationale de Medecine Esthetique (President of UIIME – Prof. Olga Panova) held a congress on aesthetic and anti-aging medicine in Miami, Florida. The event took place in 7 halls of the JW Marriott Miami Hotel. Most delegates were from the USA, Canada, Europe, Latin and South America Africa, Asia and even distant Australia,

and 78 speakers altogether. During the congress there were several dozen companies that presented beauty and aesthetic equipment as well as anti-aging products [1].

The congress lasted 4 days. The events took place daily from 8.30 AM to 5.30 PM. On the last day the congress came to a close at about 2 PM. The 12<sup>th</sup> of November sessions were: Anti-Aging Symposium (all day) and Mesotherapy Workshop – Special Anti-Aging Session: Hormonal Mesotherapy in Treating

Wrinkles, Eyesight and Flabby Bellies (2 hours, carried out by Dr. Thierry Hertoghe from Belgium). During the congress, the general session started every day at 8.30 AM. There were frequently simultaneous sessions and delegates had to decide which one to attend. The sessions were grouped into topics – the most important ones were: Body Contouring and Lifting; Non-Surgical Aesthetic Gynecology; Facial Aesthetic and Techniques; Lasers, Light and Energy Based Devices; Skincare Focus: Acne, Scar and Pigmentary; Discoveries in Aesthetic Medicine; Stem Cells, PRP and Regenerative Aesthetic Technologies; Aesthetic Medicine from Around the World. All the above sessions ended with discussions by the delegates, where they frequently had to be interrupted due to lack of time and length of each session. During the congress, there were many presidents and vice-presidents of Aesthetic Medicine Societies from many countries, for example: US, Brazil, Italy, France, Poland, Turkey, Australia, Ecuador, Venezuela, Uruguay – they had many interesting speeches. All delegates had very interesting presentations. Below are some abstracts presented by the congress delegates [1].

### Abstracts from the congress

Prof. Torello Lotti (Prof., PhD, MD), Dermatologist from Milan, Italy had two presentations: “Vitiligo – What’s New and What’s True in 2015?” and “Botulinum Toxin: its Use Beyond the Cosmetic Approved Scopes”. Here is a short abstract of the first one: [2]. The reduction of melanocytes’ number and their impaired viability at vitiliginous lesions level originate skin depigmentation, the classic visible expression of Vitiligo. The growing scientific evidences regarding the involvement of cytokines and growth factors in keratinocytes-melanocytes cross-talk allowed the scientific community to carefully evaluate the possible therapeutic role of these signaling molecules in Vitiligo treatment. Regrettably, the therapeutic goal of an effective modulation of cell signaling through the use of specific cytokines, antibodies and growth factor is affected by enormous problems linked with severe adverse effects which greatly reduce the safety and effectiveness of this approach. The Low Dose Medicine (LDM) approach can represent the ‘joining link’ between the necessity of new specific therapeutic tools for Vitiligo treatment and a feasible, effective and safe signaling molecules-based therapeutic approach. Counteract the inflammatory phenomena rebalancing pro-and anti-inflammatory response with selected low dose SKA (Sequential Kinetic Activation) cytokines and antibodies (IL-10, IL-4 and Anti-IL-1) and, concomitantly, stimulating melanin synthesis via up-regulation of transmembrane receptors through SKA low dose b-FGF, represents the hypothesized new LDM approach for Vitiligo treatment.

The choice of low dose SKA IL-5, IL-10 and Anti-IL-1 antibodies fully reflect the need of rebalance a dysregulated immune response, with a double purpose: to restore the Th1-Th17/Th2-Treg balance, in order to reduce inflammation and autoimmune hyperactivation; to reduce the excessive oxidative stress. The choice of low dose SKA b-FGF, is related to the fact that its expression by keratinocytes is essential for correct epidermal pigmentation; this signaling molecule is able to induce and maintain both proliferation and survival of melanocytes stimulating melanin production in response to skin stress conditions. Low dose SKA b-FGF exerts a pro-mitotic and pro-migrating action on melanocytes with consequent stimulation of the keratinocyte-melanocytes cross-talk and improves ROS detoxifying processes.

Dr. Patrick Treacy (MD), Cosmetic Medicine Doctor, from Dublin, Ireland presented “The Dublin Lift and New Trends in Lasers, IPL and Other LBDS”. Below is the abstract of the second presentation: [2]. Intense pulsed light technologies have evolved significantly since their introduction to the medical community 20 years ago. Now such devices can be used safely and effectively for the cosmetic treatment of many vascular lesions, unwanted hair, and pigmented lesions. Newer technologies often give results equal to those of laser treatment. Most of the currently available IPL emission devices however, can be limited at the lower end of the emission spectrum by using dichroic or ‘cut off’ filters to more selectively target desired cellular or structural elements. Although most IPL devices have one or two cutoff filters, available cutoff filters include 515, 550, 560, 570, 590, 615, 645, 690, and 755 nm and function by blocking emission of shorter wavelength light. Apart from wavelength, a wide range of other treatment parameters including pulse duration, pulse sequence, and pulse delay time may be customized on most devices, affording users greater versatility and precision. Therefore, one attractive feature of IPL devices is their ability to treat various targets with the same device by applying different filters. Another well-recognized advantage of IPL devices is the relatively large footprint of their spot size and their resulting treatment speed, allowing one to limit the total number of pulses per treatment to a minimum and affording a swift treatment of large anatomical areas. Nonetheless, the larger handpieces and spot sizes can pose a potential maneuverability disadvantage when treating uneven skin surfaces.

Dr. Anna Gałęba (PhD, MD), Aesthetic Medicine Doctor from Poznan, Poland presented the speech on “The impact of using aesthetic medicine treatments to improve the quality of patients life, their personal life and functioning in society”. Here is the summary: [2-4]. The research was performed on patients using

aesthetic medicine treatments. The study selected 603 patients of both genders, aged 21-61 years, using the procedures: needle mesotherapy, chemical peels, fillers (with cross-linked hyaluronic acid) and botulinum toxin type A, injected for the wrinkle correction.

Some of the principal results:

- Patients aged between 30 to 49 make almost 3/4 of all the users of aesthetic medicine (74%)
- Women use aesthetic medicine ten times more often than men
- As much as 94% of the respondents noticed improvement in their appearance after the aesthetic treatments
- None has noticed any deterioration in the attitude of others towards them after the treatments
- Aesthetic treatments helped men get to know a new partner (40%) more often than women (27%)
- Patients, using fillers and botulinum toxin type A, more often realized dreams to meet a new partner (34% fillers, TXB 30%)
- Fillers have the biggest impact on the achievement of dreams related to the personal sphere (82%) – botulinum toxin type A (75%), needle mesotherapy (72%) and chemical peels (67%). No clear domination of fillers and botulinum toxin type A, as is the case in meeting a new partner, inter alia, arises from the fact that the realization of a dream based on the personal sphere is not closely linked with the immediate improvement in appearance, which seems to be much more useful if you think of a new relationship
- The correlation between the duration of use of particular aesthetic medicine treatments and the realization of patient's dreams of public speaking is very clear. The percentage of realization of dreams of public speaking presented as follows: a few months 46%, 52% 1-2 years, 2-3 years 66%, 3-5 years 73%
- Number of performed types of aesthetic surgery has a significant impact on the patient's dream of speaking in public: 1 type – 63%, 2 types – 58%, 3 types – 61% and 4 types – as much as 75% of the respondents
- Patients of aesthetic medicine using one and two types of treatment, more often than others (including 75% of each) recognize the improvement in the quality of life in a non-material sense than those using three and four types of treatments (70 and 69%).

## Conclusions

- All patients noticed the impact of the treatments on their aesthetic appearance
- Women pay much more attention to their appearance than men

- For 72% of the patients who have dreams for the personal sphere, aesthetic medicine changed their approach to life, it allowed them to realize the dream
- Up to 29% of the patients who were interested in meeting a new partner, realized their plans
- 63% of the patients realized their dreams associated with public speaking
- 73% of the patients admitted that after using the aesthetic medicine treatments their quality of life in a non-material sense improved.

Dr. Clara Santos (MD), Dermatologist from Rio de Janeiro in Brasil, presented the speech [2] "Facial Rejuvenation Without Surgery and Laser in 9 Days". Human beings, since remote ages sought a way to look better and younger. Nowadays, in this dynamic and competitive world, it is really necessary to keep up a good appearance. Exoderm is a special technique for the treatment of the aging face, wrinkles, hyper-pigmented spots, melasma, blemishes, active acne and acne scars. Exoderm is a buffered and modified phenol solution, very safe. Exoderm presents excellent and long-lasting results. It was created in 1986, in Israel, by Dr. Yoram Fintsi and introduced in Brazil in 1996 by Dr. Clara Santos. Currently Exoderm is done on all continents with 20.000 cases already performed. Exoderm is performed in an ambulatory environment with local anesthesia and light I.V. sedation. At the end of the procedure, the face is covered by a Micropore tape forming a 'mask' that remains on the face for 24 hours. After the first 'mask' is removed, sub galactic bismuth powder is placed to form a second 'mask' in order to protect the skin for the next seven days. During the first day the face is swollen and there is an eye edema. When the second 'mask' is removed, a new and fresh skin is seen. The new skin presents increased redness that subsides gradually during the next two to three months. During the speech Dr. Clara Santos presented many pictures from her clinical practice – the before and after effects.

Dr. Adam Rish (BMedSC, MB BS, BA (Hons), MFA, FFMACCS, FPCPA, FACCM), Aesthetic Medicine Doctor from Bondi, Australia, had three presentations: 1. "«Less is More»: Sub-Maximal Dosing Of Botulinum Toxin To Increase Cost Effectiveness and Patient Satisfaction and Retention Rates", 2. "Polyacrylamide gel 10 years experience: with Particular References to Complications From Filling of the Body of the Lip" and 3. "Optimizing treatment frequency in laser tattoo removal".

Here is the speech abstract [2]: "«Less is More»: Sub-Maximal Dosing Of Botulinum Toxin To Increase Cost Effectiveness and Patient Satisfaction and Retention Rates". Patients often prefer smaller improvements in wrinkling but retention of movement

i.e. paresis rather than paralysis, Strategic placement of toxin may achieve this at lower doses with reduced cost. Methods: Meta-analysis of comparative dosing recommendations in papers in Dermatological Surgery over a decade for botulinum type A toxin usage in the upper face. Clinical audit of Laserase patients attending for botulinum treatments with low toxin type A in June 2012. Results: Paper in Dermatological Surgery advised a total dose of up to 140U toxin for three upper facial areas. The author uses 20U for these areas. To be more cost effective the higher dosage would need to be five times better (assuming a slightly longer duration of action for higher dosage) to offer the same cost efficiency. Laserase audit June 2012: 134 patients treated in nine sites. Mean dosage 15U (Botox). Total dosage 1835U, total top ups 7 (6%), mean top up dosage 3U (0.02% total dose). Audit past visits between June 2007 and June 2012: mean 10 treatments over 3 years. Mean top up doses 7.7% patients. Patient retention at 3 years 76%. Patients growth over 5 years 263%. Conclusions: Low dose botulinum may not be low dose due to studies not making cut off dose low enough. There was a high level of satisfaction, low top-up incidence and high patient retention rates at Laserase with low dose treatment of BTX-type A. It is desirable to titrate toxin dose for individual patients, dependent upon muscle mass, wrinkle severity, desired outcome and finances in order to maximize 'cost of satisfaction' ratios.

Dr. Jacobus (Cobus) van Niekerk (MD), Aesthetic Medicine Doctor from Johannesburg in South Africa, presented two speeches: 1. "Treating the Male Patients – A Species in Their Own Right" and 2. "Making Beautiful Faces in All Colours". This is short abstract of the second presentation: [2]. Regardless of ethnicity and skin tone, most of our patients desire a more beautiful, healthy looking skin, less sagging and more attractiveness. Formulating a treatment plan for each of the skin tones from Phototype I-VI, one should keep in mind very specific considerations. These considerations are more than just the risk for PIH, it also includes cultural features, ethnic proportional differences, diverse skin compositions, financial situation and individual preferences. This can be applied to facial injectables, lasers and light treatments, peeling, mesotherapy and other skin treatments. The presentation was focused on a step-wise approach to ensure that you have considered all the important aspects when creating the perfect treatment plan for each patient.

Dr. Jeong-Eun Kim (PhD, MD), Aesthetic Medicine Doctor from Seoul, South Korea had a speech on "Newly Introduced LAMS (Local Anesthetic Minimal-Invasive Liposuction) Using Hypotonic Tumescence For Body Contouring". This is the abstract: [2]. Background: Local Anesthetic Minimal-Invasive

Liposuction (LAMS) using hypotonic tumescence for body contouring is newly introduced in South Korea. Objective: To investigate the effect of new LAMS procedures. Materials and Method: LAMS consist of one session of subcutaneous fat tunneling with minimized liposuction and infusion of 0.45% hypotonic solution simultaneously in target area followed by three sessions of mesotherapy. The efficacy of LAMS was assessed by reduction of the target area circumferences. Results: The LAMS group showed almost triple greater reduction at 4<sup>th</sup> weeks compared to the control group (-0.6 cm vs. -1.7 cm,  $p < 0.001$ ). The greatest reduction in circumference of the LAMS group was observed in the abdomen (-2.2±1.6 cm) at 4<sup>th</sup> week followed by the arm (-1.5±0.8 cm), and then the thigh (-1.4±0.8 cm), (abdomen vs. Arm or thigh,  $p = 0.006$ ). The arm showed the highest percent circumference loss (%CL) (1.6 vs. 4.7%,  $p < 0.001$ ) compared to the abdomen (0.9 vs. 2.6%,  $p < 0.001$ ) and thigh (0.9 vs. 2.4%,  $p < 0.001$ ). We observed a significant relationship between weight change and %CL of the control ( $r = 0.64$ ,  $p < 0.001$ ) and LAMS groups ( $r = 0.33$ ,  $p < 0.001$ ). Conclusions: LAMS is a feasible and effective minimally invasive local fat reduction procedure, although patient's healthy lifestyle is necessary to achieve better results.

Dr. Jie-Qing Wang (MD), Plastic Surgeon from Dalian, China presented two speeches: 1. "The Combined Use of PRP and Autologous Fat Transplantation in Facial Rejuvenation" and 2. "Autologous Fat Grafting in Mid-Facial Rejuvenation". This is the abstract of the first speech: [2]. Background: Nowadays patients want a long-lasting youthful appearance but through a less invasive approach. Adipose tissue is an ideal tissue filler substance as it is non-allergenic and of low trauma. But fat grafts have always represented a challenge in inducing the necessary neoangiogenesis, which results in significant resorption. Platelet-rich plasma (PRP) has been clinically used as an easily prepared growth factor cocktail that can promote wound healing, angiogenesis, and tissue remodeling. This study was designed to explore the clinical effect of autologous fat inject combined with PRP in facial rejuvenation. Methods: 13 cases of patients in our department from Jun 2012 to Oct 2014 were included in this study. The adipose tissue was harvested from patient's abdomen and thighs, then the combinations of the fat and PRP were injected into face for filling and augmentation, The therapeutic effects were evaluated using photo difference and VISIA professional skin image analysis system in terms of freckles, pores, wrinkles, and skin texture. Results: Postoperative follow-up in these thirteen patients from three to six months showed that all patients got satisfactory results without localized indurations, infection or fat

liquefaction. VISIA skin detection results showed that there was a greater improvement in skin texture and pores compared with pre-operation and there was no significant difference in improvement in freckle and wrinkles. Conclusions: The implantation by using autologous fat combined with Platelet-rich plasma is an optimal method for facial rejuvenation. The results suggest that the combined injection exhibits better effects on improving pores and skin texture.

Dr. Victor Ollarves (MD), Aesthetic Medicine Doctor from Caracas, Venezuela presented the topic: "Treatment of Venezuelan Female Patients suffering of Melasma Using the Q-Switched 1064 ND: YAG Laser Mode". This is the abstract: [2]. Melasma is an acquired pigment disorder exhibiting face hyperpigmentation characterized by light to dark brown patches on one or both cheeks. Melasma is most prevalent in middle-aged women with hormone imbalances. The Q-switched neodymium-doped yttrium aluminum garnet (QS-Nd:YAG) laser has been previously used for both skin toning and treatment of facial pigment. Objective: The aim of this study was to evaluate the effectiveness of melasma treatment using the Q-Switched 1064 nm Nd:YAG Laser mode. 20 female patients, ranging from 34 to 56 years (mean age: 45 years), with clinical diagnosis of melasma were studied. The face of each patient was treated with the 1064-nm QS-Nd:YAG laser in eight sessions weekly. Each patient

underwent face exposure with the 1 ns Q-switched mode, 1.2 J/cm<sup>2</sup>, 8 mm spot size, frequency 10 Hz with multiple passes. Before and after treatment photographic assessments were performed using the VISIA Complexion Analysis System (Canfield Scientific., Fairfield, NJ, USA). Images were taken in three different close-up views (front, right lateral 37° and left lateral 37°) for each patient to quantify the percentiles of skin texture and tone. Results: After treatment, skin texture and tone of the whole group of patients was significantly improved for the front (p<0.005), right lateral (p<0.005) and left lateral (p<0.005) views compared to those obtained before treatment. Conclusions: The use of Q-switched mode of the 1064 nm Nd:YAG Laser was effective in treating melasma and improved face appearance of the patients.

### Summation

International and world congresses are events where doctors from around the world can meet and share their thoughts on the latest achievements in medicine. The "20<sup>th</sup> World Congress of Aesthetic Medicine", was one of such events. We look forward to the next world congress of aesthetic medicine ("21<sup>st</sup> World Congress of Aesthetic Medicine"), which will be organized in Istanbul, Turkey, between 27-29 October 2017.

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