2022 Global Partner Oral Presentations

Dynamic Hand Score (DHS) as new AI-based Tool for Hand Measurement and Outcome Evaluation

Presenter: Nicolas Cuylits

Introduction: Hand and wrist disorders affect patients' general and health status. Various Patient-reported outcome measures (PROMs) questionnaires have been developed to study those disorders and understand their effects on patients' well-being. Over time, the DASH (Disabilities of the Arm, Shoulder, and Hand) score has been considered the 'gold standard 'for disorders of upper limb extremities. However, all those questionnaires are linear, meaning that the patient must always answer the same questions regardless his problem.
Today, applying computer science innovations can be the starting point of creating more dynamic models of PROMs. Therefore, we present the preliminary work towards creating a new Dynamic hand score (DHS) questionnaire, which uses artificial intelligence (AI) to assess different factors in hand pathology, allowing for a more accurate evaluation of the condition. More precisely, the resulting dynamic algorithm allows to target patient's problem by showing only the most relevant items related specifically to the patient's hand condition. The patient answers the DHS before the consultation as a "check-in" questionnaire and AI mapping allows the physician to extract the conventional existing scores from the DHS answers.

Materials and methods: Pubmed and Google scholar were screened for Patient-reported outcome measures (PROMs), used to assess hand function. The most frequent hand-related PROMs were included. The items of all these PROMs were reviewed; the author group translated English items to French unless a French cross-cultural, validated version existed. Items that were present in at least two PROMs were included in our dynamic questionnaire. We developed collaboration with a start-up focused on artificial intelligence (AI) to develop a professionalised dynamic questionnaire allowing the program to select the most relevant question for each patient.

For scoring the answers, physiotherapists specialised in hand surgery were asked to rate the importance of each item used to construct our questionnaire.

Results: One hundred ninety items constituted the experimental DHS questionnaire. The DHS questionnaire was then introduced to our practice (Centre de chirurgie de la main – Brussels) in Novembre 2021 as a web based, RGPD compliant App, linked to our clinic agenda. We will present the results of our early practical experience with the DHS in our centrum based on the first 200 patients who answered the questionnaire.

Conclusion: Using AI technology such as machine learning algorithms into PROMs is feasible and should soon improve patients' assessment allowing efficient management. However, more studies with larger groups are needed in for the new DHS score validation, to enhance the patient's overall experience, diagnosis and improve machine learning efficiency.

Microsurgery in the Treatment of Burns

Presenter: Guillermo Wiegering, MD

This lecture demostrates the importance today of Microsurgery in the treatment of Burns, and the importance of having a microsurgery team in a Reconstructive and plastic surgery Service. It take us through the beginning of the use of Microsurgery for séquele cases in burns, to the advantages that they bring together today. All of this support by medical bibliography.

Revisiting the Back as an Option in Breast Reconstruction from Basic to Cutting Edge: a Narrative Review

Presenter: Federico Flaherty

There are several reconstructive options for women after a breast cancer mastectomy, particularly for autologous tissue-based reconstruction. Although the transfer of abdominal tissue is currently described as the preferred method, it may not be suitable for all patients. The purpose of this work is to examine the back as a reconstructive strategy for patients with breast cancer, especially in certain situations such as thin patients, the need for skin coverage, the presence of radiotherapy, and obese patients. Additionally, the back becomes an attractive option in special situations when there is a fundamental need to perform autologous reconstruction but not having the technical or human resources to perform a microvascular free flap. The latissimus dorsi (LD) flap is an excellent and reliable option for breast reconstruction but has been criticized for morbidity and complications. The sophistication of the surgery led to the discovery of the thoracodorsal artery perforator (TDAP) flap, which reduces the morbidity of harvesting the entire latissimus muscle. In recent years, the use of the LD flap has re-emerged due to various advancements and applications in technical situations. We believe that both flaps are of great use in breast reconstructive surgery, and aim to describe each of the flap's limitations, advantages and disadvantages.

Establishment of New Reconstruction Algorithm Based on Anatomical Underpinnings for Palatal Defects

Presenter: Hiroshi Matsumoto

Background: The hard palate is the partition between the nasal and oral cavities, while the soft palate is responsible for velopharyngeal closure and plays an important role in swallowing and speaking functions. Palatal reconstruction separates the oral and nasal cavities, re-establishes velopharyngeal closure, and maintains smooth nasal breathing. For reconstructing full-thickness defects localized to the palate, nasal lining and velopharyngeal narrowing in addition to flap transplantation into the oral cavity have been performed to maintain velopharyngeal function. However, the necessity and indications for nasal lining and velopharyngeal narrowing are unclear. Further, there is no defect type classification or reconstruction algorithm for full-thickness defects localized to the palate.

Methods: We classified the defects into four types—Type I, confined to the hard palate; Type II, from the hard palate to the midpoint of the soft palate; Type III, extending from the hard palate to the posterior midpoint of the soft palate; and Type IV, defective velopharyngeal closure due to scar contracture after secondary healing. Reconstruction was performed in 18 cases with the free flap alone or a combination of the free and pharyngeal flaps according to the type of defect, and their postoperative swallowing and speaking functions were evaluated. Furthermore, we investigated the distribution of the levator veli palatini (LVP) and palatopharyngeus (PP) muscles in the soft palate for palatal reconstruction after tumor resection in 15 cadavers. Anatomical considerations were added to the clinical data to create a palate-reconstruction algorithm.

Results: Seven, six, four, and one cases had Types I, II, III, and IV defects, respectively. Postoperative function was well maintained in all patients. The distribution of the LVP muscle was 37.5%–65.2% (mean, 49.5%) in the sagittal direction of the soft palate. Assuming the posterior end of the hard palate as 0%, midpoint of the soft palate as 50%, and palatopharyngeal arch as 100%, the central portion of the LVP muscle bundle was 43.8%–65.2% (mean, 53.7%), and 41.7%–76.7% (mean, 54.5%) of the LVP muscle bundle was distributed posterior to the midpoint of the soft palate. The distribution of the PP muscle was 56.3%–75.8% (mean, 65.6%) in the sagittal direction of the soft palate. The central portion of the PP muscle bundle was 50%–68.8% (mean, 61.1%), and 54.1%–76.7% (mean, 64.9%) of the PP muscle bundles was distributed posterior to the midpoint of the soft palate.

Conclusions: In reconstruction of full-thickness defects localized to the palate, if the defect is up to 50% in the sagittal direction of the soft palate, the distribution of LVP and PP muscle bundles remains at least 50% and motility of the soft palate is maintained. Therefore, nasal lining or velopharyngeal narrowing is not mandatory. However, if the defect is >50%, the remaining LVP and PP muscle bundles are few and remaining soft palate can cause marked hypokinesia. Therefore, nasal lining and velopharyngeal narrowing should be performed. Based on the study results, we propose a novel palatal reconstruction algorithm.

Outcomes after Tumor Resection with Reconstruction of Facial Skin Cancer: A Prospective Cohort

Presenter: Juan Carlos B. Marzan

Purpose: The objective of the study is to know the outcomes after tumor resection with reconstruction of facial skin cancer of patients treated in our center.

Methods: This is a prospective cohort study that ran for 2 years where a follow-up of up to 1 year was conducted on each patient. Data were gathered by asking the patients to answer the FACE-Q scales while other patient data were obtained from medical charts. Complications were assessed every study visit while recurrence of cancer were monitored at 6-, 9- and 12-months post-op intervals.

Results: Results show that 5 (15%) of the 33 patients underwent direct closure (DC), 4 (12%) underwent skin graft coverage (SG), and 24 (73%) underwent local flap (LF). All groups (DC, SG, and LF) showed increase in score over time in relation to: (1) satisfaction with overall facial appearance, (2) social function, (3) psychological function, (4) early life impact of treatment, and (5) satisfaction with outcome of the reconstruction procedure. On the other hand, all groups showed decrease in score over time in relation to: (6) appearance-related psychosocial distress, and (7) recovery early symptoms. The interaction of the variables - score and period of follow-up, were not significant in the (1) satisfaction with overall facial appearance, (2) social function, (5) satisfaction with outcome and, (6) appearance-related psychosocial distress. The interaction of score and period of follow-up were found to be significant in the (3) psychological function, (4) early life impact of treatment, and (7) recovery early symptoms. There was no significant difference in the proportion of patients who exhibited complications. There was no tumor recurrence detected.

Conclusion: All patients across three groups were satisfied with the outcomes. Social and psychological function also improved progressively in all three groups. The psychological function progress in the DC and LF groups are more notable. No tumor recurrence has been observed among all 33 patients who were included in the study.

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Influence of Parthenolid on the Regeneration of the Median Nerve following Reconstruction by Non-Neuronal Tissue in a Rat Model

Presenter: Jonas Kolbenschlag

Segmental nerve defects are devastating injuries that often lead to severe functional impairment, even despite optimal surgical therapy. Autologous nerve transplants remain the gold standard for these situations. However, their availability is limited, and they have an inherent donor site morbidity. Various conduits, such as Muscle-Vein-Conduits (MVC), might serve as an alternative. However, their inherent regenerative potential is limited compared to autologous grafts. Thus, ways to improve nerve regeneration through such conduits seem desirable. A single, systemic application of Parthenolid, a natural ingredient of feverfew, significantly improved nerve regeneration in a murine crush injury model of the sciatic nerve. However, its effects in segmental nerve injuries or in non-neuronal tissue has not yet been investigated.

20 male Wistar-Rats underwent a bilateral 7 mm resection of the median nerve. On one side, the defect was reconstructed with an MVC. On the other side, the nerve stumps were sutured into the muscle to prevent spontaneous regeneration, thus serving as an intra-individual control. Half of the animals then received 20 alternating intravenous and intraperitoneal injections of Parthenolid (200ng/kg BW) or a vehicle substance (DMSO). During the 12 week follow up, functional recovery was evaluated by gait analysis, grip strength, flexor digitorum superficialis muscle weigth and histology.

During the whole follow up, no animal of the vehicle group displayed active flexion of the toes on the MVC side. In the Parthenolid group, 30% of animals showed that function already 8 weeks after surgery. This increased to 60% after 10 and 80% after 12 weeks, respectively ($p<0.05$ and 0.01). Muscle weight was significantly increased in the Parthenolid group ($p<0.05$) when compared to the control group.

We could show that Parthenolid has a pro-regenerative effect in a murine segmental nerve defect model of the median nerve reconstructed by MVCs. Further research is warranted to further elucidate the underlying mechanism.

Clinical Staging and Genetic Profiling of Korean Patients with Primary Lymphedema Using Targeted Gene Sequencing: Preliminary Results

Presenter: Yujin Myung

Lymphedema is a progressive disease caused by lymphatic flow blockage in the lymphatic pathway. Primary (hereditary) lymphedema is caused by genetic mutations without secondary causes. We performed clinical profiling on Korean primary lymphedema patients based on their phenotypes using lymphoscintigraphy and made genetic diagnoses using a next-generation sequencing panel consisting of 60 genes known to be related to primary lymphedema and vascular anomalies. Of 27 patients included in this study, 14% had lymphedema of the upper extremities, 78% had lymphedema of the lower extremities, and two patients had lymphedema in both. Based on the International Society of Lymphology staging, 14, 10, and 3 patients had stage 3, 2, and 1 lymphedema, respectively. Only one family was genetically confirmed to harbor likely pathogenic variants in CELSR1. The proband was carrying two likely pathogenic variants in CELSR1, while her mother was confirmed to carry only one of the variants. Furthermore, two other variants of uncertain significance in CELSR1 were detected in other patients, making CELSR1 the most interesting gene in our study. The clinical and genetic profile of hereditary lymphedema reported here is the first such data series reported for South Korea.

3D Printing Assisted Maxillofacial Reconstruction with Fibular Free Flap in KCMH

Presenter: Pasu Promniyom

Introduction: Complex mandibular or maxillary reconstruction still challenge today; hence 3D printer has been used to assist surgery. Aim of this study is to review using of 3D printer assisting mandibular or maxillary reconstruction in our institute

Method: Retrospective review include patient underwent vascularized fibular free flap for mandibular or maxillary reconstruction from June 2019 to June 2022

Result: 12 (40%) patients underwent vascularized fibular free flap for mandibular or maxillary reconstruction using cutting guide from 3D printing model with 3D printed titanium plate. 18 (60%) patients who underwent vascularized fibular free flap for mandibular or maxillary reconstruction using in-house cutting guide from 3D printing model with model assisted prebent plate. 2 patients received maxillary reconstruction. 16 (53%) reconstructions were malignant condition. In benign group one patient had partial flap necrosis. In malignant group 7 patients need double free flap for reconstructions. Two (6%) patients had venous congestion and two (6%) patients had partial flap necrosis

Conclusion: 3D printing assisted mandibular or maxillary reconstruction is safe and may improve quality of mandibular and maxillary reconstruction.

Frequent Malignant Skin Tumors – results and new national trends.

Presenter: Cristian-Radu Jecan

Purpose: Basal, squamous cell carcinoma and malignant cutaneous melanoma are the most frequent malignancies world-wide (1,2,3) and in Romania (4). Plastic surgeons should implement on a regular basis sound principles and guidelines for diagnosing, staging, treatment and reconstruction. New developments should be adopted. The quality of life of the patients with skin cancer is affected by the morbidity risk, surgery, and cosmetic or functional aspects. The aim of this study was to evaluate the quality of life of patients with skin cancer prior to and postsurgical intervention, reconstructive method, complications, and cure rates.

Methods and materials: 247 patients with skin tumors, where retrospectively reviewed, over a 24-month period, with a follow-up of 1 year. Quality of life was evaluated through an initial questionnaire that was given to all consenting patients. The study included the responses of all patients at hospital admission, after one month of surgery, and after one year of surgery. Patient demographic characteristics, complications, cure rate and reintervention where reviewed.

Results: The age of the 247 enrolled patients ranged between 26 and 96 years, with a mean of 68 ± 13 years. Among the enrolled patients, 142 (58%) were men and 105 (42%) were women. Moreover, 161 (65%) were from urban areas, and 86 (35%) from rural areas. The incidence of MM and NMSC is increasing worldwide, becoming an issue for the healthcare systems due to treatment costs and morbidity. Reconstructive methods, local or distant recurrences were analyzed accordingly. New evaluation methods were implemented (infrared scanning) and the impact on reconstructive methods studied.

Conclusion: Skin cancer is one of the most common types of malignancies, with a rapidly increasing incidence every year, affecting patients' QoL. Primary tumor management, high risk categories, staging and adjuvant therapy are of paramount importance and should be constantly updated and implemented in every plastic surgeon practice.

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A Single-Center Early Experience with Robot-Assisted DIEP Flaps: Future or Hype?

Presenter: Winston Wittesaele

Introduction: The DIEP flap is the workhorse in microvascular breast reconstruction. Rectus muscle sacrifice or denervation and inappropriate rectus sheath closure are main causes of abdominal wall morbidity. Robotic vessel dissection may limit fascial incision length below the arcuate line and rectus denervation. This study describes on how to implement this technique in daily surgical practice and provides an overview of risks, advantages and take-home messages.

Materials & methods: A retrospective data collection of all robotic DIEP flap reconstructions between August 2020 and November 2021 was conducted at our university hospital. Primary outcome variables were flap success, conversion to open technique and perioperative complications. Secondary variables included timing of the different robot-assisted stages (installation, dissection, and closure), total operating time and postoperative complications.

Results: In total 12 DIEPs were performed by the same surgeon through the transabdominal preperitoneal plane with a multiport robotic system. There was 1 small bowel injury requiring an urgent laparotomy and 1 hematoma at the receptor site requiring surgical drainage.

There were no flap losses. Furthermore, we report on the timing of the different surgical stages, including installation of the robot, robot-assisted operating time and robotic closure.

There were no major complications in the follow-up period.

Conclusion: We present a large series of robotic DIEP flap reconstructions for delayed and immediate autologous breast reconstruction. We've experienced that this technique is reproducible and feasible in a daily hospital setting. However, we expose our patients to additional abdominal complications compared to the conventional technique without having clear evidence of reduced abdominal wall morbidity or cost-effectiveness. In this abstract, we compare risks with possible benefits and provide future perspectives based on our experience.

Dermal Nipple-Areolar Complex Perfusion through Full Thickness Circumareolar Scars in Two-Stage Nipple Sparing Mastectomy: Similarities in Dermal Neoangiogenesis in Human Clinical and Porcine Experimental Results.

Presenter: Thierry Tondu

PURPOSE: In large breasts, surgeons remain reluctant to perform nipple-sparing mastectomy (NSM) due to higher risk of nipple-areola-complex (NAC) necrosis. Delayed procedures enhance blood supply to NAC in multiple stages (1). The incidence of NAC necrosis in one-stage versus delayed reconstructions is 5,08 versus 0,48 percent (2). Neovascularization through circumareolar scars in pigs provides sufficient dermal NAC perfusion without necrosis after 4 weeks delay (3). The purpose of this study is to investigate the similarity between a porcine model and clinical human results in neovascularization to NAC after staged NSM. Neoangiogenesis is shown dynamically by near-infrared fluorescence.

METHODS: Seven BRCA patients (14 NAC) with large breasts were offered a two-stage reduction through Wise pattern incisions followed by prosthetic reconstruction after 3 months. Delayed NSM is simulated in 25 nipples (3 pigs) with a 4 weeks-interval. The nipples undergo a full thickness circumareolar incision onto the muscular fascia with preservation of underlying glandular perforators. In the second stage NSM is performed. A silicone sheet is introduced in the mastectomy plane to prevent NAC revascularization by wound bed imbibition. In both groups, digital colour imaging is used to assess necrosis. Near-infrared fluorescence with indocyanine green (ICG) is used to assess perfusion patterns (4).

RESULTS: No NAC necrosis is seen in 14 human and in 25 porcine NAC. The alteration in perfusion pattern is similar in humans as in pigs. ICG-scan shows complete alteration of NAC perfusion pattern from V1 (subjacent gland) to V4 pattern (capillary fill following devascularization exhibiting a predominant arteriolar capillary blush without distinct larger vessels) in all human and porcine nipples (3). Complete reperfusion through circumareolar scars takes about three minutes in humans and five minutes in pigs.

CONCLUSIONS: NAC delay reverses glandular perfusion similarly to adequate dermal neovascularization in pigs as in humans. This pilot study suggests that a clinical study in humans with a 4-weeks interval would be feasible. From an anatomical point of view a 4-weeks interval would broaden the indications for this staged technique to therapeutic NSM.

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Free Fibula Osteomyocutaneous Flap with Lateral Supramalleolar and Soleus Muscle Flap—A Novel Chimeric Flap Combination

Presenter: Ravikiran Naalla

Purpose: Complex three-dimensional defects following head and neck cancer resection are not uncommon. In such cases, a reconstructive surgeon is not only faced with the challenge of reconstructing bone, mucosal and skin defects simultaneously, but also large dead spaces which need to be obliterated with a muscle flap. Attaining these reconstruction goals with a single flap is desirable and suitable in certain settings.

Patients & Methods: From January to October 2021, we have performed four flaps with the chimeric combination of fibula osteomyocutaneous flap, lateral supramalleolar flap, and soleus muscle flap. The flap indication was complex oro-mandibular defects. The mode of utilization of the chimeric components has been described.

Results: All flaps were successful except one supramalleolar flap. The flap was lost due to thrombosis due to excessive stretch in the pedicle. Rest of the chimeric flap components were successfully used for planned defects.

Conclusion: By the addition of the soleus muscle flap to the chimeric fibula supramalleolar flap, the soft tissue bulk of the flap can be improved. In selected complex oro-mandibular defects, this chimeric flap can be another great reconstructive option.

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Clinical Evaluation of the Efficacy and Tolerability of Rigenase® and Polyhexanide (Fitostimoline® Plus) vs. Hyaluronic Acid and Silver Sulfadiazine (Connettivina® Bio Plus) for the Treatment of Acute Skin Wounds: A Randomized Trial.

Presenter: Luigi Losco

Background: Timely treatment of acute skin lesions is paramount to prevent delayed wound healing, chronicization of the wound, and subsequent increases in health care costs. The efficacy and tolerability of Connettivina® Bio Plus (Group A) gauze and cream, and Fitostimoline® Plus (Group B) gauze and cream for the treatment of acute superficial skin lesions have never been compared.

Materials and Methods: Single-center, parallel, randomized trial was designed, and a block randomization method was used. Participants: Sixty patients were enrolled at University of Salerno - San Giovanni di Dio e Ruggi d'Aragona Hospital. All patients fulfilled the study requirements. One application of the study drugs every 24 h, and a six-week observation period was carried out. Efficacy and tolerability of the study drugs were the main outcome measures.

Results: Sixty patients (Group A, n = 30; Group B, n = 30) were randomized; mean age was 58.5 ± 15.8 years. All patients were included in the outcome analysis. Total wound healing was achieved in 17 patients undergoing treatment with Connettivina® Bio Plus and 28 patients undergoing treatment with Fitostimoline® Plus. The greater effectiveness of the latter was significant (p = 0.00104). In Group B, a significantly greater degree of effectiveness was observed in reducing the fibrin in the wound bed (p = 0.04746). Complications or unexpected events were not observed.

Conclusions: Both Connettivina® Bio Plus and Fitostimoline® Plus are secure and effective for treating acute superficial skin lesions. Fitostimoline® Plus was more effective than Connettivina® Bio Plus in wound healing of acute superficial skin lesions, especially if fibrin had been observed in the wound bed.
Trial registration: Clinical trials NCT04596124
Funding: None

Sub-muscular Breast Augmentation Using Tumescent Local Anesthesia

Presenter: Emilio Trignano

Tumescent local anesthesia (TLA) consists of infiltration of saline solution with lidocaine and epinephrine into the tissues to obtain regional anesthesia and vasoconstriction. The

use of TLA in augmentation mammoplasty has been described for sub-glandular positioning. We describe a modified TLA technique for primary submuscular breast augmentation reporting our experience during the past 7 years.

From 2010 to 2017, 300 patients underwent bilateral primary sub-muscular breast augmentation under TLA and conscious sedation. The tumescent solution was prepared with 25 mL of 2% lidocaine, 8 mEq of sodium bicarbonate, and 1 mL of epinephrine (1 mg/1 mL) in 1000 mL of 0.9% saline solution. Firstly, the solution was infiltrated between the pectoral fascia and the mammary gland, secondarily, during surgery, under the pectoralis major muscle.

The average amount of tumescent solution infiltrated while performing TLA was 740 mL per breast. No signs of adrenaline or lidocaine toxicity were reported and conversion to general anesthesia was never required. In all patients, no pain nor discomfort was reported during the pre-operating infiltration and surgical procedure. We reported a major complication rate of 3.3% (4 hematomas and 6 seromas) and a minor complication rate of 6.0% (8 implant dislocation and 10 dystrophic scars formation).
In conclusion TLA represents a safe and efficacious technique for performing breast augmentation surgery with sub-muscular implant positioning particularly in patients with Brugada syndrome and Myasthenia Gravis. This technique moreover guarantees good pain control during and after surgery and has low incidence of postoperative side effects. Patients subjected to sub-muscular breast augmentation with TLA were satisfied.

The management of bilateral facial paralysis Author: Georgios Psaras

Presenter: Georgios Psaras

Introduction: Bilateral facial paralysis is a very rare condition that occurs more commonly in the congenital type of facial paralysis i.e. Moebius Syndrome. (The traumatic and iatrogenic forms of bilateral paralysis are exceptionally rare)
It is supremely debilitating for the affected individual since facial expression is absent, speech is impaired and lagophthalmos with paradox epiphora are present in varying degrees.

Materials and methods: Fourteen patients with Moebius syndrome and bilateral facial paralysis received 21 gracilis free flaps for reanimation. Seven patients received only unilateral flaps whereas 7 received bilateral reanimations. The muscle was innervated through coaptation to the masseteric nerve. The lagophthalmos was treated in the major- ity of cases with either a gold weight or a platinum/iridium chain placed in the pre-tarsal space. The technique will be described in detail.
The success of this technique and the superior results compared to cross facial nerve grafting, lead us to perform this technique to most unilateral congenital/ traumatic/iatrogenic and other long standing facial paralysis in addition to the bilateral

forms.

Conclusion: A total of 61 free flaps were performed with no flap losses from 2003 till today. We believe the Gracilis muscle is an ideal muscle for this type of reanimation. It is long, thin, expendable, and easy to harvest. Its anatomic location facilitates a si- multaneous two-team approach. The single stage procedure and one nerve coap- tation allow a stronger muscle contracture and more symmetrical smiles. In the young a significant element of brain plasticity leads to spontaneity in smiling, in- dependent from teeth clenching.

The Need for More SCIENCE In The Art and Science of Rhinoplasty

Presenter: Georgios Psaras

Rhinoplasty is by general admission one of the most demanding plastic surgical procedures we perform on a regular basis. It is often referred to as more of an art than science since a large number of our intraoperative actions are based on personal experience, cultural heritage, training background and personal taste and not so much on evidence-based facts.

The notion that rhinoplasty is an art and not science often exonerates us from being scientific and methodical about it. We often present our results with the caption that the patient was very happy with the outcome or that a specific technique simply works well in our hands.

In this short presentation we will put forward our opposing view to the above and show that with simple measurable and reproducible tests and evaluations, rhinoplasty be it functional or aesthetic, can be more scientific.

Simple subjective evaluations like the Visual Analogue Scale, NOSE test or the Utrecht Questionnaire (many others are also available) help “quantify” our results and also speed up teaching and training by eliminating unsuccessful procedures from our syllabus.

Objective evaluation of a surgical outcome with the use of pre-and postoperative tests (Peak Nasal Inspiratory Flow, Rhinomanometry, Acoustic Rhinometry and others) will also help patients with nasal obstruction by providing useful prognosticative information. The increasing managed healthcare is starting to demand these tests.

In this world of ever-increasing information and mis-information scientific study is needed to confirm claims we make over decades. Our speciality has remained lackadaisical in this field risking loosing a large part of this challenging field called rhinoplasty. It is time we regain our authority in this field.

CUTANEOUS HISTOLOGY AND IMMUNOHISTOCHEMISTRY IN PATIENTS WITH FACIAL AGING AFTER AUTOLOGOUS TRANSPLANTATION OF CULTURED FIBROBLASTS

Presenter: Isabella de Oliveira Rosa

Introduction: Aged skin represents a challenge in the face of the various current therapeutic strategies. The autologous transplant of cultured fibroblasts (ATF) would stand out for repopulating the dermis with fibroblasts, restoring its functionality. Objective: To evaluate the histological and immunohistochemical characteristics of aged facial skin in patients undergoing ATF.

Method: Fragments of aged skin from the face of 20 patients undergoing ATF were received. Histological sections of these fragments from the preauricular, retroauricular and submental regions obtained before the ATF, represented the control group; and, after the ATF, the experiment group. There was randomization of the hemifaces, as well as for the collection in the follow-up with three, six and 12 months. Hematoxylin and Eosin analyzes investigated skin organization, epidermis and dermis thickness, vascularization and cellularity index. In Masson's Trichrome stain, the qualitative morphological analysis of the dermis was verified. Picrosirius Red (polarization) verified the content, orientation, and birefringence of collagen fibers. In immunohistochemistry, markers for cytokeratins (AE1 + AE3), mesothelial cells (vimentin), elastin, collagen fiber types I and III and fibronectin were detected.

Results: After ATF, there was greater thickness of the epidermis ($p<0.001$) and dermis ($p<0.001$), as well as neovascularization ($p<0.001$) and increased cellularity ($p=0.002$); more organized, thicker and more intact collagen fiber bundles; and, under polarized light, more intense birefringence of collagen fibers. Also, greater immunoexpression of cytokeratins ($p=0.044$), vimentin ($p=0.014$), elastin ($p=0.004$), type I ($p=0.044$), type III ($p=0.031$) and fibronectin ($p<0.001$) collagens. Conclusion: The ATF restored the morphological characteristics of the aged skin of the face.