2024 Global Partner Oral Presentations

Clinical Trial in Scaffold Guided Breast Tissue Engineering: Preliminary Findings

Abstract Presenter: Matthew Cheng BSc MBBS (Hons)

Abstract Co-Author(s): Gwenda Chapman, Michael Wagels, Owen Ung

Introduction: Scaffold guided breast tissue engineering (SGBTE) is a concept which uses additively manufactured scaffolds which are implanted to regenerate soft tissue. SGBTE has the potential to transform reconstructive and cosmetic breast surgery where implanting permanent silicone implants is the most common method used. Complications from permanent prostheses are well reported and include capsular contracture, rupture, and development of Breast Implant Associated Anaplastic Large Cell Lymphoma. Our SGBTE approach involves implanting a porous and bioresorbable breast scaffold made from medical grade polycaprolactone (mPCL) which is filled with autologous fat graft. Over time, the body acts as a bioreactor which supports the regeneration of soft tissue, whilst the scaffold resorbs leaving an autologous tissue engineered breast reconstruction. Our research group have extensively investigated SBGTE preclinically and have performed a first-in-human trial for pectus excavatum correction.(1-3) The purpose of this study is to demonstrate the safety and clinical performance of implanting mPCL breast scaffold in a clinical trial for breast implant revision or congenital defect correction surgery.

Methods: An open label single arm clinical trial assessing the use of mPCL breast scaffolds was conducted (Ethics Approval: HREC/2021/QRBW/79906) (ClinicalTrials.gov ID NCT05437757). Inclusion criteria were adult women requiring breast implant revision or congenital defect correction surgery. These patients underwent a capsulectomy and removal of implants if required, then insertion of a sub-glandular 150-200 ml mPCL breast scaffold which was filled 50% by volume with autologous fat graft. Key endpoints were safety measured through an adverse device event rate, and performance measured through patient reported outcomes (BREAST-Q) and radiological outcomes with magnetic resonance imaging (MRI).

Results: This first-in-human procedure was successfully performed in all recruited patients (n=19). Six patients (n=6) have completed their 12-month follow up. To date there have been no device related complications or stopping criteria triggered in the trial. Preliminary performance analysis was performed on 11 patients who had sufficient follow up (2-months post-operative). Mean patient reported quality of life scores demonstrated improved breast satisfaction, sexual well-being and psychosocial well-being with implanted scaffolds compared with their baseline. There were also improved scores compared to 1-year published outcomes as a reference. MRI demonstrated good soft tissue retention at 2-months post-operatively.

Conclusion: Preliminary findings suggest implanting mPCL breast scaffolds is safe up

to 12 months post-operatively. There is improvement in patient reported outcomes and radiological evidence of soft tissue retention at an early time point. Longer term outcomes are yet to be determined as they have not been assessed.

References:

(1) Chhaya MP, Balmayor ER, Hutmacher DW, Schantz JT. Transformation of breast reconstruction via additive biomanufacturing. Scientific reports. 2016 Jun 15;6(1):28030.
(2) Cheng M, Janzekovic J, Mohseni M, et al. A preclinical animal model for the study of scaffold-guided breast tissue engineering. Tissue Engineering Part C: Methods. 2021;27(6):366-377.
(3) Cheng ME, Janzekovic J, Theile HJ, et al. Pectus excavatum camouflage: a new technique using a tissue engineered scaffold. European Journal of Plastic Surgery. 2022/02/01 2022;45(1):177-182. doi:10.1007/s00238-021-01902-5

"Self-esteem evaluation and satisfaction after rhytidectomy with versus without superficial musculoaponeurotic system plicature in post-bariatric patients"

Abstract Presenter: Ana Belen Gutierrez Rodriguez MD

Abstract Co-Author(s): JOSE CARVALHO JR, Paulo Greimel, Lydia Ferreira MD, PhD

Introduction: Bariatric surgery has become an increasingly popular procedure for the treatment of morbid obesity and its associated comorbidities1,2. The increase in bariatric procedures has consequently led to augmented demand for post-bariatric body contouring procedures2. Medical literature provides plenty of articles addressing body contouring after bariatric surgery; however, there are only a few studies related to cervicofacial deformities and facelift outcomes in post-bariatric patients. The resulting excess skin leads to an appearance of accelerated facial aging3, which is psychologically debilitating and negatively affects self-esteem.
Facelift surgery (rhytidectomy) is the mainstay treatment, and the efficacy of superficial musculoaponeurotic system (SMAS) plicature in this subgroup comes into question, due to impaired wound healing. This study intends to compare aesthetic results and self-esteem variation in patients subjected to rhytidectomy with and without SMAS plicature.

Methods: This randomized, single center, clinical trial recruited 29 post-bariatric women, from March 2018 to March 2020, who were randomly assigned to rhytidectomy either with or without SMAS plicature. Self-esteem was evaluated pre- and post-operatively and compared between groups. Patient satisfaction was also evaluated through a study-specific scale. Expert evaluation was conducted to assess for a satisfactory aesthetic result.

Results: Improvement in self-esteem was observed in 54.5% of the patients in the control group, as opposed to 26.8% in the intervention group ($p > 0.05$). Contrast

between groups was further investigated by stratifying patients according to self-esteem levels, revealing that the intervention group had 57% of patients with higher self-esteem. Subsequent statistical analysis revealed that patients with higher preoperative self-esteem had a decrease in postoperative scores ($p < 0.05$). Expert assessment of whether the patient had undergone plicature was wrong in 43% of the cases in the intervention group, as opposed to 36% in the control group.

Conclusion: The results demonstrate that there was an improvement or maintenance of self-esteem in more than half of patients, which is consistent with the available literature4. There was no difference between pre- and post-operative self-esteem between groups. However, improvement or maintenance in self-esteem perception was observed in the majority of patients, with preoperative self-esteem influencing postoperative perception. Patient satisfaction with the procedure was expressive. As for expert evaluation, results of the intervention group were rated higher, but experts could not correctly assess whether plicature had been made.

References:

1. Trus TL, Pope GD, Finlayson SR. National trends in utilization and outcomes of bariatric surgery. Surg Endosc. 2005;19(5):616-620.
2. Poyatos JV, Balibrea JM, Sales BO, et al. post-bariatric surgery body contouring treatment in the public health system: cost study and perception by patients. Plast Reconstr Surg. 2014;134(3):448-454.
3. Sclafani AP. Restoration of the jawline and neck after bariatric surgery. Facial Plast Surg. 2005;21(1):28-32.
4. Jacono A, Chastant RP, Dibelius G. Association of Patient Self-esteem With Perceived Outcome After Face-lift Surgery. JAMA Facial Plast Surg. 2016;18(1):42-46. doi:10.1001/jamafacial.2015.1460.

Hybrid Gluteoplasty: A safe alternative for gluteal enhancement surgery

Abstract Presenter: Daniela Maldonado M.D.

Abstract Co-Author(s): Patricio Covarrubias, Paulo Godoy MD, Jennifer Gaona Silva MD

Background: Gluteoplasty is a procedure that has experienced rapid growth in recent years within aesthetic surgery (1), however, the risk of potential associated complications has generated concern among plastic surgeons to such an extent that a task force has been created to deliver recommendations with the aim of increasing the safety of this type of interventions (2, 3).
The term "Hybrid Gluteoplasty" refers to the combination of different techniques in the same surgical intervention to obtain the best aesthetic results(4, 5). In the present work, we describe the surgical technique that seeks to improve gluteal volume and projection, along with the remodeling of adjacent structures to achieve a better body contour,

following strict safety parameters in order to minimize potential complications.

Methods: Between 2016 and 2023, 253 patients underwent surgery. Gluteoplasty was performed with intramuscular implants, liposuction of the areas with lipodystrophy and lipoinjection in the adjacent tissues. patients have been followed up to date and associated complications were recorded.

Results: Of the 253 patients, 240 were women, 4 were transgender women, and 9 were men. All implants used were made of cohesive silicone gel. As far as the implants shape concerns, 125 anatomical and 128 round were used. In terms of complications, in general there were 32 (12,6%): 23 of them (9%) where wound dehiscenses and just required local management, 8 cases (3,1%) were implant rotations (all of them anatomical implants), 1 case (0,4%) was an herniated implant, 2 cases (0,8%) presented seroma and 2 cases (0,8%) implant pocket absceses (that required explantation). We had no cases of fat embolism.

Conclusions: By combining the placement of intragluteal implants, liposuction of areas of lipodystrophy and lipoinjection in adjacent areas, the hybrid gluteoplasty improves gluteal volume and projection while providing better body contour, which ultimately determines better aesthetic results. By avoiding risk areas during lipoinjection such as the central gluteal area, the feared risk of fat embolism decreases, giving the procedure greater safety. In the present study, there was only the occurrence of local complications, the vast majority of which were successfully resolved with local management, but no event of fat embolism or mortality associated with the procedure occurred.

References:

1) https://www.isaps.org/discover/about-isaps/global-statistics/reports-and-press-releases/global-survey-2022-full-report-and-press-releases/
2) Villanueva, Nathaniel L et al. "Staying Safe during Gluteal Fat Transplantation." Plastic and reconstructive surgery vol. 141,1 (2018): 79-86. doi:10.1097/PRS.0000000000003934
3) Mofid, M Mark et al. "Report on Mortality from Gluteal Fat Grafting: Recommendations from the ASERF Task Force." Aesthetic surgery journal vol. 37,7 (2017): 796-806. doi:10.1093/asj/sjx004
4) Godoy, Paulo Miranda, and Alexandre Mendonça Munhoz. "Intramuscular Gluteal Augmentation with Implants Associated with Immediate Fat Grafting." Clinics in plastic surgery vol. 45,2 (2018): 203-215. doi:10.1016/j.cps.2017.12.004
5) Cárdenas-Camarena, Lázaro, and Héctor Durán. "Improvement of the Gluteal Contour: Modern Concepts with Systematized Lipoinjection." Clinics in plastic surgery vol. 45,2 (2018): 237-247. doi:10.1016/j.cps.2017.12.005

Reconstruction of large and ptotic breasts

Presenter: Rado Zic MD
Co-Author: Zlatko Vlajcic MD, PhD, Plastic Surgeon,

Breast reconstruction is an integral part of Breast cancer surgery. Patients with large and ptotic breasts can be a challenge to reconstruct. The authors will present different possibilities for the reduction of the skin envelope during skin and nipple-sparing mastectomy and reconstruction in these patients.

OUR APPROACH OF SELECTIVE BIOPOLIMER REMOVAL BY TUMESCENT INFILTRATION (CLIME TECHNIQUE)

Abstract Presenter: Enriquillo Clime Rivera MD

INTRODUCTION: Currently, aesthetic procedures in particular fillers and injections are very popular and sometimes can sadly be perform by untrained and unlicensed personal, mostly because of rapid results and low cost. For these reasons patients can be seduce or deceived the used of industrial substances such as the application of biopolymers. These substances can, in short and long term, lead to numerous complications, with severe deformities, skin necrosis, death and chronic illness like iatrogenic allogenosis. Therefore, surgical techniques have emerged to address this issue, we are presenting our approach through tumescent infiltration with selective removal, this concept is based on the tumescent state and hydro-dissection that Dr. Joseph P Hunstad introduced.

OBJECTIVE: To describe clinical characteristics and progression of three patients diagnosed with iatrogenic allogenosis who underwent a removal of biopolymers through tumescent infiltration with selective removal at a private medical center in Santo Domingo, Dominican Republic.

METHODS: This is retrospective study, in a single-center with one surgical team, including cases of three patients diagnosed with iatrogenic allogenosis that underwent an selective biopolymer removal through tumescent infiltration at the Espaillat-Guerra Seijas Plastic Surgery Center in Santo Domingo, Dominican Republic, during the period from April to May 2022. It was reported following the guidelines established in THE PROCESS framework for surgical case series. RESULTS: Three patients diagnosed with iatrogenic allogenosis were reported, all of them being women with an average age of 38 years. They all exhibited common symptoms, such as itching, hyperpigmentation, edema, localized pain and high temperature of the gluteal areas. No complications were recorded during the surgical procedure. The patient with the largest tissue extraction had a measurement of 12 x 6 x 2.5 cm. Histopathological findings revealed necrotic connective tissue with granulomatous reaction to a foreign body, specifically silicone, and in one patient, both silicone and hyaluronic acid were found. Post-surgical management included pharmacological and non-pharmacological treatments, resulting

in an effective improvement with no complications reported.

CONCLUSIONS: The selective removal of biopolymers by tumescent infiltration (Clime technique) in patients with iatrogenic allogenosis offers benefits such as the decreasing of health risks, removing the substances but avoiding the removal of large amounts of healthy tissue, restoration of a natural appearance, and patient well-being, thus prioritizing safety and health, ultimately improving long-term quality of life.

Migraine Surgery in A Developing Country: Our Experience In 6 Years

Abstract Presenter: Andres Rivadeneira MD, FAENS

Abstract Co-Author(s): Sergio Choco Sr., MD, Ana Rivadeneira

Migraine headache is a frequent cause of discomfort and disability in patients, producing significant economic costs and downtime in treatments that do not offer a solution. Extracranial nerve decompression surgery is presented as a definitive option for this disease.

This study aims to demonstrate our experience performing nerve decompression surgeries on patients diagnosed with migraine headaches in a developing country from November 2017 to November 2023.
The method used for this study is a retrospective analysis, following the guidelines described for validating pain trigger points 1. To this end, a universe of 400 patients evaluated in our private practice is taken into consideration, all with a diagnosis of migraine headache, referred by a Neurologist, submitted to the assessment, using the application of local anesthetics and/or botulinum toxin, for the identification of trigger points at the frontal, temporal, and occipital trigger points in addition to intranasal decongestants for the nasal point in some patients.

In addition to the evidence, the use of Doppler ultrasound is an invaluable tool when selecting candidates for surgery performed by the principal investigator, avoiding any risk of variation in the diagnosis and treatment,3,4.
From this number of evaluated patients, 250 are optimal candidates for extra nerve decompression surgery. These patients are classified according to sex, trigger points, and different comorbidity such as arterial hypertension and diabetes and excluded for this propose if Medication-overuse headache diagnoses are present.

The patients were managed through a daily report using a mobile application, MigraineBuddy (available free of charge), based on the Migraine Headache Index. The surgery was performed on 220 women and 30 men aged 17 to 71. Of the total number of patients who underwent surgery, 50 (20%) obtained an entirely positive result, 177 (70.8%) obtained a significant improvement, 20 patients (8%) reported a partial improvement, and three patients (1.2%) did not show any improvement with an average follow-up of 700 days.

This study shows that the surgical approach for migraine headaches is replicable in developing countries based on the literature in this field, correctly diagnosing and selecting patients and carrying out the appropriate surgical protocol. The overall procedure is highly successful worldwide when performed by plastic surgeons who are adequately trained.

References:

1. Janis JE, Dhanik A, Howard JH. Validjation of the peripheral trigger point theory of migraine headaches: Single-surgeon experience using botulinum toxin and surgical decompression. Plast Reconstr Surg. 2011; 128:123–131.
2. Burstein R, Blake P, Schain A, et al. Extracranial origin of headache. Curr Opin Neurol. 2017; 30:263–271.
3. Shevel E, Spierings EH. Role of the extracranial arteries in migraine headache: a review. Cranio. 2004; 22:132–136.
4. American Society of Plastic Surgeons. Policy statement: Migraine headache surgery. Available at: https://www.plasticsurgery. org/Documents/Health-Policy/Positions/ASPS-Statement_ Migraine-Headache-Surgery.pdf. Accessed May 3, 2021.
5. Group GNDC. Global, regional, and national burden of neurological disorders during 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. Lancet Neurol. 2017; 16:877–897

Title: Temporalis fascia free flap reconstruction of acute ankle defects

Abstract Presenter: Franck Duteille MD

Methods: We report a retrospective study of 25 patients treated in our unit for acute ankle wounds between 2008 and 2022 and who underwent superficialis temporalis fascia (FST) free flap reconstruction. There were 19 males and 6 females. The mean age was 38 years old (5 to 62 years old). The location of defects was: Medial malleolar (12 cases), Achilles tendon (8 cases) and dorsum of the foot (1 cases). The mean surface area of the wounds was 36 cm2. 16 cases were post-traumatic with 4 cases involving crush injury. The remaining 9 cases involved wound complications from orthopedic reconstruction with exposed or infected hardware.

Results: Operative times ranged from 3.5 hours to 5 hours. All flaps were performed with end to side anastomoses in both arterial and venous positions (posterior tibial in 21 cases and dorsalis pedis for the other cases). Immediate STSG's were performed after the revascularization of the FST. Occlusive dressings were used for 5 days, and flap monitoring was done by Doppler exam. Ankle mobility was limited by splint or cast. There were no microvascular complications and no flap failures. One skin graft failure

requiring repeat STSG, and one donor site alopecia (2 cm width) occurred. Minimum follow up is one year. All wounds healed primarily with no subsequent breakdown. All patients considered the scar at the donor site as invisible or minimal.

Conclusion: For us the FST flap has many advantages. It is thin, pliable and results in a very hidden scar at the donor site. This flap is our first choice in the management of small wounds around the ankle. The only limit is the surface area of the FST which can be appropriate only for small defects.

Analysis of Functional Regeneration in a Rat Model of Median Nerve Injury and Repair - Evaluation of Mechanical Allodynia, Grip Strength and Gait Behavior

Abstract Presenter: Jana Ritter

Abstract Co-Author(s): Cosima Pr ahm, Manuela Buettcher, Thomas Wuttke, Adrien Daigeler, Johannes Heinzel, MD, Jonas Kolbenschlag, MD

Introduction: Functional deficits after nerve injuries pose a major clinical problem. This highlights the importance of implementing methods in preclinical research allowing for comprehensive quantification of functional recovery. In the evaluation of sensory recovery after nerve injury, a response to tactile stimulation can erroneously be allocated to regeneration of the injured nerve, disregarding the process of collateral spouting of adjacent uninjured nerves into the denervated skin. In the rat sciatic nerve model a significant influence of collateral sprouting of intact nerves on the development of neuropathic pain could already be revealed. Our project aimed to analyze and correlate sensory and motor recovery and investigate the contribution of collateral nerve sprouting in a rat model of median nerve injury and repair.

Material & Methods: Male Wistar rats (n=10) underwent transection and reconstruction of the median nerve with epineurial sutures in one forelimb. In the contralateral forelimb, 15mm of the median nerve were resected and the nerve stumps were coaptated to surrounding muscles to prevent regeneration. For 12 weeks after surgery, mechanical allodynia, grip strength and gait behavior were assessed weekly by means of the Von Frey Test, the Grasping Test and the CatWalk gait analysis system. To analyze the effects of collateral sprouting, Von Frey Monofilaments were applied to predefined test areas considering the sensory innervation of the forepaws: Medial and lateral areas selectively innervated by the median and ulnar nerve and the central area non-selectively innervated by both nerves.

Results::
One week postoperatively, early mechanical allodynia was evident in the areas of the forepaw selectively innervated by the ulnar nerve and the overlapping area innervated by the median and ulnar nerves. Subsequently, mechanical allodynia developed in the areas of the paw innervated by the median nerve. This was associated with a significant

decrease in grip strength and Print Area. From week 6, mechanical allodynia increased in the median nerve innervated territory, which was associated with regeneration of grip strength and Print Area. Mechanical allodynia persisted in all areas of the forepaws until week 12. The results of the functional tests correlated significantly and revealed a marked effect of nerve reconstruction on functional outcome.

Conclusion: Collateral sprouting of uninjured nerves and regeneration of the injured nerve contribute differently to sensory reinnervation after nerve injury. The use of functional tests to evaluate motor and sensory recovery provides profound insights into the interaction of these processes and adds to the understanding of the development and maintenance of neuropathic pain.

Patterns of treatment failure - Reconstruction of large non metastatic locally advanced breast cancer with free flaps.

Abstract Presenter: Saumya Mathews MS, Mch

Introduction: Locally advanced breast cancer (LABC) is heterogeneous ranging from local involvement of skin to peau-d'orange, and/or extensive lymphadenopathy. In India, 40% present as LABC. Neoadjuvant chemotherapy (NACT) is standard but 10-15% don't respond. Surgery necessitates extensive resection and reconstructions. The reconstruction of extended breast skin defects resulting from complex-mastectomies (multiple procedures) can pose a surgical challenge for reconstructive plastic surgeons. Herein, we present our institution's experience in tackling such extremely complex post-mastectomy defects. We evaluated their long-term outcomes.

Methods: A prospective series of non-metastatic BC patients who underwent large resection and reconstruction between 2016-2021 was retrospectively assessed.

Results: Of 63, 44 were LABCs, 6 oligo-metastatic, 10 local recurrences and 3 oligo-recurrences. Median age was 45 years. All had cT,cN2-3 disease. Standard NACT was administered in 56 (88.8%), 1 received endocrine therapy. Of these, 41% progressed, 42% had partial response and 16% stable disease. Six patients were operated first for ulcero-proliferative disease. Median clinical and pathological tumor size was 10cm(1-20cm) and 7.2 cm(0-20cm) respectively. 43% were TN, 35% HR+ and 22% HER2+. Reconstruction method was LDflap-29, FALT-26 and free-TRAM/DIEP-8. Morbidity was seen in 9/63(14.2%) patients. At median 18 months, 43(68.3%) recurred-5, 26 and 12 local, distant and both respectively. Free flaps [anterolateral thigh flap (ALT) variants, deep inferior epigastric perforator flap (DIEP) and tensor fascia lata flap (TFL)] were used in 34 patients whereas pedicle-flap based reconstruction [latissimus dorsi flap (LDF) and vertical rectus abdominis muscle (VRAM) flap] were performed in 29 patients. The following ALT variants were used for reconstruction: ALT only (n=19), ALT+TFL (n=4), ALT+ vastus lateralis (VL), (n=4) and ALT+ anteromedial thigh (n=1). The mean longitudinal and transverse dimensions of the included flaps were 23.211 ±

7.197 cm and 8 cm [IQR, 12-15] respectively. The mean flap area was 162.5 cm2 [IQR, 258.2 - 445.2]. The overall complication rate in this cohort was 25.6%. Hemoglobin (p= 0.002) and albumin (p=0.005) levels were associated with increased incidence of flap excision and debridement. On Cox-regression, TN-status (HR-2.44,1.02-5.8,0.043) and non-receipt of post-operative radiation therapy(HR- 2.68,1.28- 5.58,0.008) predicted recurrence. 20/63 progressed before radiation. Time-to-recurrence was 5 and 9.8 months for locoregional and distant metastases. The DFS and OS at 3 and 5 years was 26.4% (25.07-39.73) and 38.6% (23.9-53.3) and 21.1% (19.69-35.21) and 35.4% (20.7-50.1) respectively.

Conclusion: Curative resection with negative margin is desired in non-metastatic breast cancers, caution is needed in those who progress on chemotherapy and need large resection and reconstruction. Surgery needs to be backed by post-operative radiotherapy and further systemic therapy. Oncoplastic reconstruction with a combination of free and pedicled flaps are feasible options for reconstruction of extended breast skin defects resulting from multiple mastectomy procedures.

The Association Between ADM Size and Complications Following Immediate Breast Reconstruction: A Retrospective Cohort Study

Presenter: Aviella Goodman Gabay, MD

Co-Author(s): Rami Binenboym, MD, Eva Nassar, Ronen Toledano, MD, Yotam Teldan, Adi Maisel Lotan, MD, Yoav Gronovich, MD, MBA

Introduction: In recent years there has been an upsurge in pre-pectoral immediate implant based reconstructions, necessitating the use of a larger ADM for implant coverage (1). Former studies found a potential increase in rates of infection, flap necrosis and seroma in breast reconstructions using ADM (2). Yet, to the best of our knowledge, there is no data showing whether this increase is explained by the body's reaction to the mere presence of ADM or its size. This study aimed to examine the potential correlation between the size of ADM used and the incidence of postoperative complications.

Methods: A retrospective, single center analysis of 229 women (297 breasts) undergoing immediate breast reconstruction with human acellular dermal matrix. Breast reconstructions were stratified into two cohorts: Small ADM - those using an ADM smaller than 130 cm^2 (n=91) and Large ADM - those using an ADM larger than 130 cm^2 (n=206). Data regarding demographics, co-morbidities, surgery and outcomes were collected and analyzed. Seroma was assessed by time to drain removal.

Results: The Small ADM cohort had a significantly lower resection weight compared to the Large ADM cohort (mean= 401, 627 grams, respectively), lower BMI (mean= 23.4,26.94 kg\m^2, respectively) and more neo-adjuvant chemotherapy (37.4%,23.3%,

respectively). There were also significantly more subpectoral reconstructions in this cohort (67%). There was no statistically significant difference among the cohorts in time to drain removal (mean= 13.34, 14.09 days, respectively). Logistic regression demonstrated a trend towards an increase in infection rate in the Large ADM cohort (OR = 5.40, p-value=0.06). Infection rate was significantly higher in patients with a larger resection weight (OR = 1.001) and reconstructions using macro-textured implants (OR = 20.53). There was no significant difference in other major complications (12.1% in the Small ADM cohort VS 21.8%).

Conclusions: The incidence rates of seroma and other major complications were not significantly affected by ADM size used in breast reconstructions. Although results showed a larger ADM size may be associated with an increase in infection rate, they were not significant. The findings of this study suggest that the potential increase in rates of postoperative complications previously seen is rooted in the presence of ADM and is not affected by its size. This provides additional evidence maintaining the efficacy and safety of ADM use in pre-pectoral breast reconstructions.

References:

(1) Ostapenko E, Nixdorf L, Devyatko Y, Exner R, Wimmer K, Fitzal F. Prepectoral Versus Subpectoral Implant-Based Breast Reconstruction: A Systemic Review and Meta-analysis. Ann Surg Oncol. 2023 Jan;30(1):126-136. doi: 10.1245/s10434-022-12567-0. Epub 2022 Oct 16. PMID: 36245049; PMCID: PMC9726796.
(2) Chun YS, Verma K, Rosen H, Lipsitz S, Morris D, Kenney P, Eriksson E. Implant-based breast reconstruction using acellular dermal matrix and the risk of postoperative complications. Plast Reconstr Surg. 2010 Feb;125(2):429-436. doi: 10.1097/PRS.0b013e3181c82d90. PMID: 20124828.

Analysis of circulating T cells and comprehensive T cell receptor of the patients with lymphedema: lymphatic venous anastomosis has a potential to influence to immune dysfunction of lymphedema

Presenter: Hirofumi Imai MD
Co-Author(s): Takakazu Kawase, Tomoyuki Yano, MD, Toshiro Mese, Shuhei Yoshida, MD, Tatsuo Ichinohe, Isao Koshima, MD

Objective: Lymphedema is a debilitating progressive condition owing to the accompanying cellulitis and angiosarcoma, which suggests lymphedema associated immune dysfunction. However, the immune status of peripheral T cells during lymphedema remains poorly understood. Hence, we investigated the circulating T cells in patients with lymphedema, post-LVA and healthy controls (HCs).

Methods: Peripheral blood samples from 21 patients with secondary lymphedema before LVA and 12 months post-LVA and 20 HCs were collected. We assessed the

results of LVA as the extremity lymphedema (EL) index. In this study, we investigated the profiles of immune checkpoint molecules (PD-1, Tim3) in T cell subsets and comprehensive T cell receptor (TCR) analysis with calculating TCR repertoire as the diversity index (Simpson's index). Furthermore, we collected lymphatic fluid from two patients (primary lymphedema and lymphatic leakage from thoracic duct after hepatic cancer surgery) and analyzed T cell profiles and TCR repertoire.

Results: The EL index decreased in p-LVA compared to that in lymphedema, with a mean of 244 and 263 ($p < 0.05$). The PD-1+ and PD-1+Tim3+ expression assays on CD4+ T cells (%) showed significant upregulation in lymphedema compared to that in HCs; 33.2 and 19.8 ($p < 0.01$) and 1.1 and 0.5 ($p = 0.04$), respectively. However, the PD-1+ and PD-1+Tim3+ expression on CD4+ T cells in post-LVA were 27.7 and 1.1, respectively, which significantly decreased compared to that in lymphedema ($p < 0.001$ and $p < 0.01$, respectively). The Simpson's index was 72.7 and 202.8 ($p < 0.05$), which decreased in lymphedema compared to that in HCs; however, Simpson's index in post-LVA increased to 261.8 (compared with lymphedema; $p = 0.05$). The Simpson's index of lymphatic fluid was 9 and 1216 and blood was 386 and 237, respectively. The shared TCR percentage between lymphatic fluid and blood was 7 %.

Conclusions: Previously, the immune checkpoint molecules upregulation and TCR repertoire downregulation indicate immune dysfunction. In this study, immune checkpoint was downregulated and TCR repertoire was upregulated during post LVA. The observations suggest the distinct immunosuppressive status of patients with lymphedema and status relief through LVA, which might be related to the reduction from the accompanying cellulitis and angiosarcoma through LVA. The shared TCR between lymphatic fluid and blood was small part of itself. This study suggested the presence of specific T cell flowing to lymphatic channels and the flow is obstructed in patients with lymphedema. This study highlighted the peripheral T cells in lymphedema and new value of LVA additionally the effect of downsizing of edema.

Regulating Aesthetic Medical Practice: The Malaysian Experience

Presenter: Shah Jumaat Mohd. Yussof MD

Aesthetic medical treatment has gained popularity in recent times. This growth in demand is expected to continue. In view of the demand and the potential financial gains, a lot of non-medically trained personnel are venturing into this field. The demarcation between procedures that can be performed by medical and non-medical practitioners or even amongst medical practitioners are beginning to be blurred. The cost to the public of non-qualified, untrained practitioners performing aesthetic procedures can be catastrophic.

In view of this, the Ministry of Health Malaysia together with various stakeholders embarked on formulating and implementing a formal guideline and credentialing process for aesthetic medical practitioners in the country. This is a step to regulate the

aesthetic medical industry to ensure Malaysians seeking aesthetic treatment will obtain the correct treatment, done in a safe facility and performed by a qualified medical practitioner.

Here, we will share our experience in formulating the guidelines and its implementation thus far.

Tumescent Local Anaesthetic and Modified lateral pillar to chest wall suture tightening technique for day stay breast reduction: 500 consecutive breast reductions

Presenter: Muhammad Ahmed MD, MBBS, FCPS

Objectives: We use superomedial pedicle technique at our centre and propose deep lateral pillar suture to narrow the breast and achieve good projection and not to leave extra skin inferiorly to avoid bottoming out. Using diluted LA infiltration reduces the bleeding and thus reduces operative time and overall complication rates.

Introduction: Symptomatic enlarged breasts are both a physical and mental debilitating condition for the young female. Common physical symptoms associated with this condition are bra strap marks, skin rash and neck/shoulder/back pain. Breast reduction surgery offer relief to these symptoms and also significantly improves the self-esteem and reduces the emotional stress.

Several breast reduction techniques have been described; commonly used ones are inferior pedicle and superomedial pedicle technique.

Materials / method: The aim of the study was to review all breast reductions carried out between March 2018 to March 2023. All cases are performed under GA combined with diluted LA infiltration at the incision line and in the breast parenchyma. We use superomedial pedicle technique at our centre and propose deep lateral pillar suture to narrow the breast and achieve good projection and not to leave extra skin inferiorly to avoid bottoming out.

Results: 500 cases were performed at the ASC as a day case procedure from March 2018 to March 2023. The mean age was 39 years.
488 cases had superomedial pedicle with wise pattern reduction and 12 patients needed breast amputation with free nipple areola graft. The mean weight of reduction was 650 gm per breast and largest reduction was 4kg for each breast.

The surgery time ranged from 25-60 min. The follow up period ranged from 6-24 months. Most patients were satisfied with the outcome. 12 cases has post operative hematoma requiring evacuation. 14 % of cases had some minor suture line delayed healing / breakdown.

Conclusion: Breast reduction is a safe day case procedure with minimal complications and aesthetically pleasing outcome. Using diluted LA infiltration reduces the bleeding and thus reduces operative time and overall complication rates.

Utility of thermal photography as a predicting tool of vascular involvement of nippel-areolar complex

Presenter: Linda Rincon Rubio, MD
Co-Author: Marisela Cemborain Valarino, MD

Background and objective: The viability of the nipple areola com- plex is a vitally important aspect in breast surgery. In previous studies, with the use of 3D mammography, we presented that the revasculariza- tion of the NIC after mastopexy is not ad-integrum and that there are dif- ferent vascular patterns in some patients after undergoing breast surgery. There are methods to evaluate tissue circulation, not only before surgery, but also during the intraoperative period, such as: colorimetry, indocya- nine green, and thermography.
Our objective is to present the use of thermography as a predictor of vascular compromise of the nipple-areola complexNIC during mas- topexy.

Methods: A prospective and observational study was carried out in 37 patients (74 breasts) who underwent mastopexies. Temperature was obtained using the Flir one pro® model 435-0004-03 portable thermal camera for smartphones (Apple® smartphone,I-phone12 version 16.1.1, evaluating temperature differentials in 3 stages of breast surgery: initial, intermediate and final.

Results: The average temperature between initial and final in patients with clinical signs of vascular compromise of the nipple-areola complex was greater than 4 degrees. Rest of patients, with nipple-areola complex without clinical signs of blood flow changes, a differential between the initial and final temperature of <3.1 degrees was found.

Conclusions. In our experience, thermography can serve as a predictive tool of vascular compromise of the nipple-areola complex during breast surgery.

Classification of SubMucous Cleft Palate and an Algorithm to surgically manage each type accordingly.

Presenter: Ghulam Qadir Fayyaz MD

Background: No consensus exists on the selection of procedures for the treatment of submucous cleft palate, with scarce reports on long-term outcomes from single-surgeon experience. SubMucous Cleft Palate (SMCP) may be difficult to diagnose at birth,

especially in cases of Occult SubMucous Cleft Palate. The SubMucous cleft portion may be limited to soft palate or extend anteriorly into the posterior half of the hard palate or even up to the anterior half of the hard palate up to the incisive foramen.
Vast majority of individuals with unrepaired submucous cleft palate (SMCP) experience speech difficulties secondary to velopharyngeal insufficiency. There is no classification system to properly describe different types of SubMucous Cleft Palate and as such there is no algorithm available to handle these types of SubMucous Cleft Palate.

Method: We reviewed 127 cases of SMCP operated in the last 8 years at CLAPP Hospital, Lahore Pakistan. Different similar types of SMCP were placed in different groups. Different surgical plans used to operate different SMCP cases were also noted.

Results: We divided the SCMP into 3 main types and then devised an algorithm to manage all these cases accordingly. When the SMCP was limited to Uvula and Soft Palate only, we label it as SMCP1; If the soft palate is of normal or acceptable length, it will be labelled as SMCP1a, however in case the soft palate length is short, then we label it as SMCP1b. Similarly, when SMCP involved Uvula, Soft Palate and posterior half of the hard palate, we label it as SMCP 2; If the soft palate is of normal or acceptable length, it will be labelled as SMCP 2a, however in case the soft palate length is short, then we label it as SMCP 2b. When SMCP involved Uvula, Soft Palate, posterior half of the hard palate and extending into the anterior half of the hard palate, we label it as SMCP 3; If the soft palate is of normal or acceptable length, it will be labelled as SMCP 3a, however in case the soft palate length is short, then we label it as SMCP 3b. We devised an Algorithm to manage all these types of SMCP cases.

Conclusion: Individuals with Non syndromic SMCP present with speech difficulties similar to those experienced by individuals with overt cleft palate. Health care professionals should be aware of diagnosing different types of SMCP and possible presenting symptoms and plan the surgical solutions according to anatomical defects in each type of SMCP.

Considerations in Forehead Reduction for Men

Presenter: Jose Nunez MD FACS

Although frontal prominence is an infrequent benign defect that causes no sequelae, it gives the patient distress due to its unaesthetic visual aspect. Proper surgical recontouring of the forehead can radically change one's appearance. In consequence, different techniques have been proposed for its management and correction. The aim of this study is to describe a surgical algorithm to treat male patients with forehead reduction to soften the "forceful" look. An observational cross-sectional study was conducted at the head and neck surgery ward of a general hospital between 2019 and 2022. We performed 35 forehead reduction operations on male patients. The median

age was 29 years (range, 26–32 years). The forehead reduction procedures performed was categorized as follows: 27 anterior table osteotomy and 8 anterior table osteotomy contouring. Median forehead reduction was 2.7 mm (range, 2–3.2 mm). The average medical follow-up for patients was 6 months, with an interval ranging from 4 to 8 months. Surgery of the forehead in properly selected male patients is sufficiently safe that it can be done for entirely aesthetic reasons. The choice of surgical technique depends on the presence or absence of the pneumatized frontal sinus. If the frontal sinus is not pneumatized, an anterior table contouring is performed and if the frontal sinus is pneumatized, an anterior table osteotomy is preferred.

References:

1 Eppley BL. Forehead/brow reduction or augmentation with cus- tom implants for enhanced facial profileplasty. Facial Plast Surg 2019;35(05):430–445
2 Galiè M, Consorti G, Clauser LC, Kawamoto HK. Craniofacial surgical strategies for the correction of pneumosinus dilatans frontalis. J Craniomaxillofac Surg 2013;41(01):28–33
3 Altman K. Forehead reduction and orbital contouring in facial feminisation surgery for transgender females. Br J Oral Maxillofac Surg 2018;56(03):192–197
4 Wolfe SA, Berkowitz S. Plastic Surgery of the Facial Skeleton. Boston: Little Brown; 1989:728–731
5 Ousterhout DK. Feminization of the forehead: contour changing to improve female aesthetics. Plast Reconstr Surg 1987;79(05):701–713

Optimizing Facial Harmony: Simultaneous Precision Rhinoplasty and Lip Lift for a Youthful Transformation

Presenter: Pawel Szychta MD, Phd, Dsc

Background: The dynamic landscape of aesthetic surgery demands innovative strategies for achieving facial rejuvenation in a harmonious manner. This study delves into the concurrent application of open structured precision rhinoplasty and Bullhorn lip lift, investigating criteria, indications, techniques, challenges, complications, and clinical implications. Meticulous patient selection is paramount, with inclusion criteria emphasizing shared concerns for both procedures and exclusion criteria designed to mitigate risks.

Methods: Ethical clearance was secured for a prospective cohort analysis involving 10 women undergoing simultaneous precision rhinoplasty and Bullhorn lip lift. Rigorous criteria ensured a homogeneous patient selection. Surgical challenges and complications were minimized through detailed planning, with a single practitioner performing both procedures for consistency. Clinical effects were evaluated using the NOSE scale for nasal breathing and the ROE questionnaire for aesthetic satisfaction.

Results: The simultaneous approach yielded promising outcomes, addressing both nasal refinement and lip aesthetics. Challenges included intricacies in surgical planning, managed through thorough preoperative assessments. Complications were minimal, primarily consisting of early postoperative symptoms. Significant improvements were observed in nasal breathing (mean NOSE score decrease from 72.4 to 4) and aesthetic satisfaction (ROE score increase from 15.4 to 92.4).

Discussion: The integration of simultaneous precision rhinoplasty and Bullhorn lip lift presents intriguing possibilities for enhancing facial harmony. Strict inclusion criteria facilitated a focused evaluation, revealing a successful balance between nasal and lip enhancements. Challenges were navigated through meticulous planning, underscoring the importance of patient selection and surgical expertise. Clinical implications suggest a comprehensive approach with unified recovery and heightened patient satisfaction.

Conclusions: Simultaneous precision rhinoplasty with Bullhorn lip lift offers a holistic and efficient approach to facial rejuvenation, aligning with patient preferences. Despite procedural complexities, the benefits of a unified recovery period and enhanced overall facial harmony are noteworthy. Ongoing research with larger cohorts and extended follow-up will refine the understanding of this approach. As the field advances, the integration of simultaneous precision rhinoplasty and Bullhorn lip lift emerges as an exciting avenue for achieving enhanced youthful facial harmony.

A New Understanding Of "Flow-Through" Concept in Flaps Surgery

Presenter: Alexandru Georgescu MD, PhD

Introduction: The reconstruction of tissue defects by using flaps is recognized nowadays as the best solution. Large and/or complex posttraumatic or post oncologic resections can often include ischemia of a segment because of vascular defects. Such cases need a simultaneous coverage and revascularization of the segment. One of the methods able to solve both these problems is the flow-through-flap procedure. The procedure consists in using a free flap in which both ends of the vascular pedicle can be anastomosed, offering so the possibility to both cover a defect and revascularize a devascularized segment. This paper will try to clarify some aspects of this concept and to better classify the flow-through flaps.

Materials and Methods: This study enrolled more than 50 patients with complex injuries of both upper or lower limb with tissue defects and devascularization of distal segments or with need to reconstruct some missing segments. We used in these cases either a flow-through flap to cover a defect and revascularize a segment and/or a second flap.

Results: All the flaps, used either as true flow-through flap or flow-through conduit survived, without any kind of complications.
Based on our observations, we elaborate a new possible classification of this kind of

flaps, in true flow-through flap sand flow-through conduit flaps.

Conclusions: Both the true flow-through flaps and flow-through conduit flaps represent a very important tool in solving the complex cases associating tissue defects and vascular defects in the upper extremity. Most indicated is the use of traditional axial and perforator flaps because an arterial conduit offers more long-term patency. Even if the venous flaps have more possible complications, because some technical modifications they proved to be useful in covering small to medium large defects.

Using our new hypothermia risk predicting scale in body contouring

Presenter: Akhmed Rakhimov MD

Introduction: Today, liposuction is positioned as the most frequent surgery in the world. Body contouring procedures are evolving every day and a new generation of specialists is actively using new methods that have been established in the world practice of plastic surgery, moving beyond traditional methods of removing excess skin and fat deposits. Nowadays there is a tendency to solve complex problems of body aesthetics, restoring the figure in one visit to a plastic surgeon, undergoing more complex procedures and therefore with higher risks. Hypothermia occurs in 50-90% of cases during such operations. Referred as the "hidden enemy", hypothermia is a modifiable risk factor, usually unnoticed, that increases the risk of other complications such as bleeding, infections, need for transfusion and longer recovery periods, even cardiac complications. Therefore, predicting the risk of hypothermia when performing body contouring surgery is an urgent task.

Aims: The aim of this is study is to improve the safety and outcomes of complex body contouring surgeries, including liposuction and lipofilling, by developing a system for predicting the risk of hypothermia for each patient before surgery.

Methods: A retrospective and prospective analysis of the data from 100 patients undergoing liposuction, lipofilling and/or abdominoplasty from 2020 to 2023 was carried out. The objective research methods implemented included: thermometry and capillaroscopy. The patients were classified in four groups depending on the complexity of the surgery. The temperature was measured during every step of the surgery and/or every 30 minutes. The data was compared with the data obtained from patients undergoing facial and breast surgery, to assess the difference between groups.

Results: Based on the results of the analysis, a unified system for predicting hypothermia in patients undergoing programmed complex body contouring surgery was developed and applied in clinical practice for the first time in Russia. Preliminary warming of the patient, air temperature in the operating room, isolation and limitation of the exposed body surface area, temperature of solutions for subcutaneous infiltration, temperature of solutions for intravenous administration and heating of the operating table were some of the factors included.

Conclusion: Using a comprehensive patient body hypothermia risk prediction scale, the hypothermia risk can be effectively predicted and prevented by adopting specific measures during the perioperative period. The implementation of this decision support tool into the everyday practice of medical institutions of the Russian Federation has helped to improve the safety and quality of complex body contouring surgeries.

Breast Reduction Post DIEP Flap: Is It Safe?

Presenter: Shahad Alalawi MD

Co-Author(s): Magdalena Cordoba, Éolie Delisle, Tomas Cordoba, Haidar Nasser Alyaseen, Waiel Abdulaziz Daghistani, MD, Andrei Odobescu MD, PhD, Maryam Mozafarinia, Carlos Cordoba, MD

OBJECTIVE: The purpose of this study is to demonstrate the practicality of doing a breast reduction
procedure on patients who have had a breast reconstruction using a deep inferior epigastric flap (DIEP) flap.

INTRODUCTION: Debulking breast flap surgery post breast reconstruction is occasionally required (1). Here,
we provide a novel approach-one that has never been described before-that uses a superomedial pedicle inverted "T" technique for breast reduction in patients who have had prior free DIEP flap breast reconstruction. We propose that after a free DIEP flap breast reconstruction, a breast reduction technique is a safe and reasonable alternative procedure.

METHODS: The study focuses on breast reduction in women who have had free DIEP flap breast
reconstruction using the superomedial pedicle inverted "T" technique.
Results: Given the satisfactory survival of the debulked DIEP flaps, our observations suggest that employing the superomedial pedicle inverted "T" breast reduction technique
in reconstructed breasts with DIEP free flaps shows great potential.(2,3,4)

CONCLUSIONS: We propose an alternative approach for secondary breast reshaping after DIEP flap
reconstruction, by utilizing superomedial pedicle inverted "T" breast reduction technique. Potential benefits of this approach include maintaining blood circulation and protecting the pedicle (5). However, due diligence is required due to the scant evidence that
is currently available and the superior surgical skill and expertise that is required. Still, this
method shows promise for performing breast reductions after free DIEP flap breast

reconstruction.

REFERENCES:
1. Farace F, Rubino C, Posadinu A, Pittalis E, Campus GV. Secondary shaping of the free TRAM: an inferior pedicle reduction mammaplasty. J Plast Reconstr Aesthet Surg [Internet]. 2008;61(2):204–6. Available from: http://dx.doi.org/10.1016/j.bjps.2007.02.031
2. Kroll SS. Fat Necrosis in Free Transverse Rectus Abdominis Myocutaneous and Deep Inferior Epigastric Perforator Flaps. Plast Reconstr Surg [Internet]. 2000;106(3):576–83. Available from: http://dx.doi.org/10.1097/00006534-200009030-00008
3. Moolenburgh SE, van Huizum MA, Hofer SOP. DIEP-flap failure after pedicle division three years following transfer. Br J Plast Surg [Internet]. 2005;58(7):1000–3. Available from: http://dx.doi.org/10.1016/j.bjps.2005.04.040
4. Kim SW, Kwon YH, Kim YH. Incidental total necrosis of a successful flap due to a secondary operation after one year. Arch Plast Surg [Internet]. 2014;41(3):294–6. Available from: http://dx.doi.org/10.5999/aps.2014.41.3.294
5. Tsur H, Daniller A, Strauch B. Neovascularization of skin flaps: Route and timing. PlastReconstr Surg [Internet]. 1980;66(1):85–93. Available from: http:// dx.doi.org/10.1097/00006534-198007000-00017

Virtually Scarless Midface Rejuvenation

Presenter: Desmond Fernandes MD

Younger patients in their thirties and early forties are presenting to the plastic surgeon because they want to reduce the early tear-trough deformity and lighten early naso-labial grooves that make them looked tired. This results from the medio-inferior descent of malar fat and Sub Orbicularis Occuli Fat. There is a loss of the "ogee" curve of the face and in order to restore a youthful appearance to the face the surgeon has to reposition these two essential "padding" structures. However, this is not achieved even with a traditional full surgical face lift which tends to address the lower face and hardly deals with the mid-face. Improvement of the sagging mid-face can only be achieved by re-positioning of the malar and SOOF pads. This paper describes a simple scar-less technique to do that.

By using 4-6 stab-incisions in a special pattern behind the temporal and side-burn hairline a number of 4/0 non-absorbable (polypropylene) suspensory suture-loops, are positioned in the malar fat pads with a spinal needle and anchored, under traction, on the superficial temporalis fascia. One can easily lift the malar and sub-orbicularis oculi fat to create a youthful lower eyelid and ogee curve to rejuvenate the face. Traction on the malar fat pads will also lighten the jowls and improve the corner of the mouth.

The operation is performed with simple instruments. It is easy, safe and suitable for younger patients (as well as part of the full face-lift) and there is a rapid recovery. It is

also a valuable tool to "restore" a classical face-lift after a few years.
The disadvantages are that accurate positioning of the loops is essential. This can be a rather uncomfortable operation for about 50% cases in the initial 24 hours.

This report will cover over 500 cases done over the past 20 years.

Evaluation of a polycaprolactone-collagen hybrid mesh for breast reconstruction after mastectomy in pig model

Presenter: Wooyeol Baek MD, PhD.

Implant-supporting materials utilized in breast reconstruction often pose challenges when used in humans. To address these issues, a novel mesh, the polycaprolactone (PCL)-collagen hybrid mesh, was developed by combining a collagen sponge with a 3D-printed PCL mesh. This mesh, exhibiting promising results in pig experiments, has the potential to replace the commonly used acellular dermal matrix (ADM) for breast reconstruction. In a study involving four 12-month-old minipigs, silicone implants were wrapped with either ADM or PCL-collagen hybrid mesh. The breast tissue was excised and implanted along with the wrapped implant. After three months, the minipigs were sacrificed for further analysis. Histological analyses and immunostaining revealed that, although there was no significant difference in capsule thickness between the ADM and PCL-collagen hybrid mesh groups, the latter demonstrated better tissue regeneration with increased collagen involvement. Additionally, the PCL-collagen hybrid mesh induced lower levels of inflammatory markers TNF-α and IL-6 compared to ADM. While ADM-induced capsules displayed higher collagen fiber alignment and alpha-smooth muscle actin (α-SMA) positive immunoreactivity, suggesting a potential for capsular contractures, the PCL-collagen hybrid mesh showed promise in minimizing these issues in the porcine model. The study suggests that the PCL-collagen hybrid mesh offers advantages over ADM, including easier tissue invasion and reduced capsular contracture in a porcine model. These results position the PCL-collagen hybrid mesh as a promising alternative for implant-based breast reconstruction (IBBR), potentially replacing ADM in clinical applications.

Otoplasty With Cartilage Scoring: Outcomes and Complications of 624 ears. Tips and tricks to ensure successful results.

Presenter: Francisco De Abreu MD

The treatment of prominent ears remains one of the most frequent procedures performed in pediatric plastic surgery. Despite the multiple techniques that have been described, there still isn't a consensus about the optimal procedure. In recent years some studies point at the cartilage "sparing" techniques as quick and easy procedures

to achieve good outcomes with low complication rates. We believe the aesthetic outcomes of cartilage scoring techniques can be superior and more stable, with less risk of recurrence and still maintain a low amount of complications. In this work we present a retrospective review of our experience over the last 15 years with more than 624 cartilage scoring otoplasties, assessing the results and complications and providing some useful tips to ensure good outcomes with this technique.

The myocutaneous medial and lateral sural artery perforator (MSAP/LSAP) gastrocnemius flap for combined soft tissue and extensor apparatus reconstruction in periprosthetic joint infection of the knee

Presenter: Rik Osinga MD

Co-Author(s): Seraina Müller, Richard Kühl, Martin CLAUSS, Dirk Schaefer MD

Introduction: Periprosthetic joint infection (PJI) is a severe complication after total knee arthroplasty (TKA). The increasing number of elderly and comorbid patients undergoing primary arthroplasty imply a greater number of revision surgeries and higher rates of PJI. Here, we present a single-center series of patients with confirmed PJI of the knee and accompanying combined soft-tissue / extensor apparatus defects, which were treated with a pedicled, myocutaneous medial or lateral sural artery perforator (MSAP/LSAP) gastrocnemius flap. No microvascular anastomosis was necessary, which in the subgroup of elderly and more comorbid patients is advantageous. Furthermore, this reconstructive method can be applied in centers where microsurgery is not available.

Methods: At the Center for Musculoskeletal Infections (CMSI) at the University Hospital of Basel, a retrospective study included all patients with PJI of the knee undergoing a pedicled myocutaneous MSAP/LSAP gastrocnemius flap reconstruction for a composite soft tissue defect involving both the skin and the underlying extensor apparatus. Thereby, the tendinous back of the gastrocnemius muscle flap and if needed Achilles tendon was used to reconstruct the extensor apparatus. The skin island was utilised to reconstruct the cutaneous defect. Perioperative complications were assessed (short-term follow-up) and the postoperative orthoplastic outcome minimally one year after surgery (long-term follow-up) is reported. This includes perioperative complications, pre- and postoperative functional and clinical assessment with the American Knee Society Score (AKSS) and the rate of new or recurrent PJI of the reconstructed knee.

Results: In total eight patients with a myocutaneous MSAP/LSAP gastrocnemius flap in PJI after TKA were included (5 female patients, mean age 73 years). Staphylococcus aureus was the most commonly found bacteria and cultured in two patients. In two cases a chronic fistula was present, but no bacteria was found. Six reconstructions were performed with a myocutaneous MSAP and 2 with a myocutaneous LSAP gastrocnemius flap. In two patiens the flap was extended with the proximal portion of

the Achilles tendon. The flap design of the skin island was chosen in such way that the donor site could always be closed primarily. The median time for the wound to heal (dry wounds) was 9 days (IQR 11, 5 – 35). Short-term follow-up (<3 weeks) showed successful reconstruction in 7 patients. One patient developed minor wound dehiscence which was treated conservatively. During long-term follow-up 1 patient developed a perigenicular haemato-seroma which required flap elevation and evacuation. In 2 patients a new hematogenous infection occurred with a new pathogen. Patients with a myocutaneous MSAP/LSAP gastrocnemius reconstruction showed a significant improvement in the AKSS functional and clinical score after reconstructive surgery (median functional AKSS was 33 before and 85, the clinical AKSS was 64 before and 91 after surgery, p=0.001).

Conclusion: The pedicled myocutaneous MSAP/LSAP gastrocnemius flap is a safe, reliable, and versatile option to reconstruct combined soft-tissue and extensor apparatus defects, in particular in patients with PJI after TKA. It allows complex orthoplastic composite reconstruction without the need for microsurgical free tissue transfer, which in the elderly and comorbid patient subgroup is relevant. The functional outcome is excellent with little peri- and postoperative complications.

The use of cemiplimab in a single regional tertiary centre to manage advanced cutaneous SCC not amenable to surgery

Presenter: Arka Banerjee MD
Co-Author(s): Suzanne Murphy, Elinor Gatfield, Will Ince, Amer Durrani

Purpose: The recently licensed immunotherapy drug cemiplimab is used to treat metastatic or locally advanced cutaneous squamous cell carcinoma (cSCC) that cannot be treated with surgery or radiotherapy. We report the experience with cemiplimab in a single tertiary centre.

Methods & Materials: Patient demographics, histology and clinical data were retrospectively collected for patients receiving cemiplimab for metastatic or locally advanced cSCC between November 2018 and March 2023. Primary objective was overall response rate (ORR). Secondary objectives included progression-free survival (PFS), overall survival (OS), and adverse events (AEs). AEs were reported according to the Common Terminology Criteria for Adverse Events, Version 4.0, as outlined by the National Cancer Institute (1).

Results: Our cohort was composed of 31 individuals: 27 male and 4 female. The median age was 78 (inter-quartile range: 10.5, range: 87). 26 patients had surgery as the primary treatment before developing metastatic/locally advanced cSCC and going on to receive cemiplimab. 20 of these 26 also received adjuvant radiotherapy at time of surgery. 3 patients had radiotherapy as the primary treatment and 2 patients had cemiplimab as the primary treatment.

20 (64.5%) patients achieved complete response, 6 (19.4%) patients achieved partial response, 2 (6.5%) patients experienced disease progression, 3 (9.7%) patients died before response assessment. ORR was 83.9% (95%CI 66.3-94.6%). Median PFS and OS were not reached after median follow-up of 13 months. 2-year PFS was 64.0% (95%CI 41.6-86.4%). 2-year OS was 73.5% (95%CI 54.2-92.8%).
24 (77.4%) patients reported AEs. Treatment was ceased in 10 (32.3%). AEs were grade 1 or 2, except myocarditis (grade 3). At data cut off, 4 (12.9%) patients had completed 2 years of treatment.

Conclusions: Our 83.9% (95%CI 66.3-94.6%) ORR exceeds the 46.1% (95%CI 38.9-53.4%) ORR of EMPOWER-CSCC 1, and our 2-year OS (73.5%) is comparable (73.3%) (2). Our findings in our cohort of 31 patients, in the context of the trial with 59 participants which gained global approval for cemiplimab, adds substantial data to the growing body of evidence on cemiplimab's long-term efficacy and supports cemiplimab as an option for patients with advanced cSCC not amenable to surgery or radiotherapy. Additionally, many patients achieved complete response with partial courses. Future studies are necessary to optimise dose and duration of cemiplimab treatment.

References:

1. US Department of Health and Human Services NCI. Common Toxicity Criteria for Adverse Events, Version 4.0. https://evs.nci.nih.gov/ftp1/CTCAE/CTCAE_4.03/CTCAE_4.03_2010-06-14_QuickReference_8.5x11.pdf2010.
2. Migden, Michael R., Danny Rischin, Chrysalyne D. Schmults, Alexander Guminski, Axel Hauschild, Karl D. Lewis, Christine H. Chung, et al. "PD-1 Blockade with Cemiplimab in Advanced Cutaneous Squamous-Cell Carcinoma." New England Journal of Medicine (NEJM) 379, no. 4 (July 26, 2018): 341–51. https://doi.org/10.1056/NEJMoa1805131.

Post-Bariatric Breast Reshaping: an Algorithm of treatment

Presenter: Franco Bassetto MD
Co-Author: Vincenzo Vindigni MD, Phd

Background: Obesity is a worldwide problem that affects millions of people from a medical and psychological point of view. To solve the related complications, patients should lose weight with the consequent need to be subjected to body contouring due to the presence of a loose and redundant skin. We report our experience in the treatment of the post-bariatric breast.

Material and methods: We considered all the post-bariatric patients subjected to a breast reshaping, and we viewed the features of the breast, the type of surgery performed, the outcomes, and the complications. All patients filled out BREAST-Q

surveys both preoperatively and after 6 months to study the rate of satisfaction.

Results: 300 post-bariatric patients underwent breast reshaping in the last 5 years. The average age was 42 years old. The follow-up period ranged from 6 months to 10 years. The most represented ptosis was second grade; the favorite technique has been mastopexy with parenchymal remodelling and augmentation with autologous tissue. The mean duration of the surgery has been 2 h. The most represented complications have been delayed healing, unfavorable scarring, hematoma, and seroma. Statistically significant improvements were observed in satisfaction with breast appearance, psychological, and physical well-being.

Conclusions: Breast reshaping in post-bariatric patients is a big challenge and only a careful analysis of the degree of ptosis of the breast, its volume and shape, and a clear communication with the patients about the real outcomes and complications can make the winning surgeon.