

The Canadian Society for Aesthetic Plastic Surgery 39th Annual Meeting

September 14 & 15, 2012, Quebec City, Quebec
Program chairmen: Dr Félix-André Têtu, President
Dr Gregory Waslen, Vice-President

1 FACELIFT SURGERY MADE EASY: PICKING THE RIGHT TECHNIQUE FOR THE RIGHT PATIENT

JE Zins
Cleveland, Ohio, USA

Understanding the anatomy of the superficial fascia and its relation to the deep fascia, retaining ligaments and facial nerve is critical to safe sub-SMAS surgery.

Facial surgery is an exercise in understanding three-dimensional nuances of complex face and neck anatomy. While the topographic anatomy of the face and neck is straightforward, the anatomy superficial-to-deep is complex and less easily mastered. With clear understanding of the complex three-dimensional anatomy, grasp of facial proportions and understanding the means of biomechanically addressing facial aging, surgery becomes easier.

In the first part of this presentation, the platysma-SMAS complex spatial relations will be described and the relationship of ligaments, facial nerve branches and muscles of facial expression will be outlined. These structures relate to one another consistently in three-dimensional fashion and once these relationships are mastered facelift operations become easier.

Three prototype subSMAS procedures will be described and outlined: Extended (separate skin-SMAS) SMAS flap, deep-plane facelift and subperiosteal lift, illumination of benefits and the drawbacks and similarities of the three procedures.

Surgical correction does not necessarily require extended release at the sub-SMAS level. SMASplication, lateral SMASectomy and minimal access cranial suspension procedures have their place in facial rejuvenation. The concepts behind the efficacy of these operations will be outlined.

Finally, the neck will receive special attention as this is often the most difficult part of the facelift. The author's preference for medial platysmaplasty, superficial deep-fat removal and muscle modification will be described and the biomechanical benefits elucidated. Other authors' preferences regarding the posterior approach will also be described.

2 FACE AND NECK REJUVENATION WITH MODERN COSMETIC MEDICINE: SURGERY MEETS NON-SURGERY

J Few
Chicago, Illinois, USA

The ability to rejuvenate the face in a natural, less traumatic, way has become easier with the increase in available aesthetic technology. We will present the core concepts of our Continuum of Beauty concept. The core components of aging include three primary factors, variable skin change, predictable volume loss in the face and ptosis of facial tissues. We propose that specific modalities should be used to treat the specific changes, allowing the plastic surgeon to use a menu of options to address given facial aging issues, in a manner that fits the patients' goals.

The Continuum of Beauty approach allows the surgeon to use synthetic and/or autologous fillers, in combination with less invasive office based facial lifting and/or cervical liposuction procedures, that can be supported by noninvasive tissue tightening technology that use focused ultrasound or radiofrequency. Aging skin findings, such as solar lentigines and atrophic changes/wrinkles, are addressed with fractional laser resurfacing. We have found that the application of focused ultrasound combined with simultaneous fractional laser resurfacing and volume restoration offers a powerful in-office

rejuvenation protocol that allows rapid recovery with predictable, durable results. While some of the energy-based technologies require time to achieve optimal change, the patient is afforded little downtime and many patients prefer an approach that allows for more gradual improvement so as to maintain privacy in the work place, while achieving an improved appearance. We will present the advantages and disadvantages of the varying approaches and emphasize the importance of safety with these technical applications.

Ultimately, we believe that the emphasis for rejuvenating the face should be placed on maintenance and not periodic "overhauling" of the face. This allows for natural, graceful, facial beauty that fits the given person.

3 BALANCING BREAST ASYMMETRIES WITH LIPOSUCTION AND IMMEDIATE BREAST AUGMENTATION

B Peterson
Kelowna, British Columbia

All patients have breast and/or chest wall asymmetries. Ultrasonic-assisted liposuction of the breast can be done to balance asymmetry of the breasts at the same time augmentation is performed. Means of determining asymmetries will be presented to aid in calculating the amount of liposuction that should be performed. Clinical examples will be presented.

4 SUBGLANDULAR BREAST AUGMENTATION WITH TEXTURED, ANATOMIC, COHESIVE SILICONE IMPLANTS: A REVIEW OF 440 CONSECUTIVE PATIENTS

J Ahmad, R Tutino, A Khan, F Lista
Mississauga, Ontario

PURPOSE: The Allergan Style 410 implant is a textured, anatomic, cohesive silicone breast implant. Recently, concerns with late seroma have been reported in patients with these textured implants. However, limited data exist regarding patient outcomes and no specific data are available regarding the incidence of late seroma. The purpose of this study was to investigate outcomes using the Style 410 implant for primary subglandular breast augmentation in a consecutive series by a single surgeon.

METHODS: A retrospective chart review was performed identifying all patients who underwent primary subglandular breast augmentation with the Style 410 implant. Patient demographics and clinical characteristics, implant specifications, and complication rates were examined.

RESULTS: Between 2002 and 2011, 440 consecutive patients were identified. The average patient age at the time of surgery was 35 years (range 17 to 62 years). The average implant volume was 385 cc (range 215 cc to 775 cc). 18.2% of patients experienced a complication and 8.6% required reoperation. The most frequent indication for reoperation was hematoma (2.7% of patients). Capsular contracture developed in 5.6% of patients. Flipping of the implant occurred in 3.6% of breasts but was largely managed nonoperatively. Seroma occurred in 1.8% of breasts; 0.7% occurred three months or more after surgery.

CONCLUSION: To our knowledge, this is the largest reported series of primary subglandular breast augmentation performed using the Style 410 implant. Our study expands the existing literature describing the safety profile of this device and its potential complications. This knowledge will assist plastic surgeons in counselling their patients when deciding on the most appropriate approach to breast augmentation.

5

MY EXPERIENCE WITH TRANSAXILLARY BREAST AUGMENTATION – A 20-YEAR REVIEW

W Carman

Toronto, Ontario

PURPOSE: To undertake a review of 1917 consecutive breast augmentation cases performed from 1992 to 2011, and to analyze 1664 cases that were performed using the transaxillary approach.

METHOD: A chart review of 1664 transaxillary breast augmentation procedures was undertaken, examining the incidence of surgical complications including infection, hematoma, implant deflation and contracture, as well as patient demographics, implant volume and reoperation rate.

RESULTS: It was found that the incidence of complications following transaxillary breast augmentation is comparable with that of other surgical approaches. Details of the surgical technique are reviewed.

CONCLUSION: The transaxillary approach to breast augmentation is shown to be a safe and efficient technique that may be offered to the majority of patients seeking breast augmentation surgery.

6

SMALL AREOLA AND GOOD PROJECTION WITH PERIAREOLA BREAST MASTOPEXY

A Gomez Jimenez

Bathurst, New Brunswick

Mammary lifting has been based mostly on the principle of reducing the envelope of the breast while maintaining unchanged mammary gland volume and support.

Regardless of the surgical approach, the recurrence of mammary ptosis is due to progressive loss of the strength in the skin brassiere. This phenomenon explains why, after some time, these patients develop emptiness in the upper pole and bottom up deformities, especially when the wise pattern is used. In vertical mastopexy, bottom up deformities are partially avoided but the upper pole emptiness is progressively evident. In periareola lifting, all of this negative process is more evident, giving a distended areola and loss of breast projection; a fact well known by surgeons who have tried this extremely difficult technique.

Because the initial reason for development of breast ptosis in these patients is the lack of skin support and poor skin quality, planning a surgery that reduces mainly the skin envelope will not address the problem in the long term, but will only result in scars and progressive deformities depending on the skin reduction pattern technique used.

PURPOSE: To obtain a better result in mastopexia, we need to change our way of thinking.

METHOD: We propose a periareola mastopexy based on the lifetime work of the Argentinian surgeon Dr Ricardo Bustos, which consists not in the reduction of the skin envelope but on the plication, support and repositioning of the mammary gland in the chest that is kept in place by a permanent mesh. We have been using a polypropylene mesh with a covalently bonded titanianised surface, TiLOOP, to preserve the support and repositioning of the breast. The closure of the periareola incision is performed without tension; just gathering the tissue to the areola nipple complex.

RESULTS: We were able to obtain a good predictable result in all the cases completed with this approach. Our follow-up to a year has shown stable results without complication and high satisfaction to patients.

CONCLUSION: The most important factor in obtaining a good stable result in mastopexy is the support given to the breast by plication and muscle fixation.

The titanium mesh is an inert material that impedes recurrence of ptosis, acting as an internal brassiere. It is not perceptible or palpable in the skin. It is radiolucent and will not interfere with mammograms and allows minimal change in the skin envelope, which will readapt to the new breast volume and shape without any tension, thus preserving a natural breast projection and small nipple areola complex with a normal anatomical morphology.

Learning objective: Keep an open mind to a new way of thinking and to surgical techniques that will allow us to improve our results.

7

'SERI SCAFFOLD', A NOVEL BIOENGINEERED TEXTILE FOR BREAST AUGMENTATION

M Jewell

Eugene, Oregon, USA

Acellular dermal matrix (ADM) (cadaveric or xenograft origin), while providing support of the breast lower pole region, have specific limitations regarding graft dimensions, process for fabrication and late-term stretch. While ADM appear useful in the reduction of capsular contracture, these products do not allow for tissue integration around textured expanders or implants. A novel bioengineered textile made of ultrapure silk-derived filaments offers an alternative to ADM with regard to larger product size, optimal tissue integration, lower rate of infection/periprosthetic fluid and lack of late-term stretch. The experience of using this textile will be discussed in terms of process for its use, clinical outcomes and adverse events.

8

DO HIGHER PROJECTING AND LARGER VOLUME BREAST IMPLANTS HAVE GREATER RISK OF COMPLICATIONS?

M Jewell

Eugene, Oregon, USA

While higher-projecting and larger volume breast implants have been implicated in anecdotal reports of causing capsular contracture, malposition, need for mastopexy or reoperations, there exists a paucity of objective data regarding long-term outcomes that substantiate these concerns. Data will be reviewed from the Allergan Core and Allergan 410 study with regard to Kaplan Meier Survival curves (univariate) and Cox Hazards Analysis (multivariate), in which cohorts of study subjects will be analyzed for the incidence of adverse events, depending on implant type, texture and size, with approximately 14,300 person-years of follow-up. The results demonstrate that higher projecting and higher volume breast implants do not have a higher incidence of adverse events associated with their use in primary breast augmentation.

9

TISSUE THERMODYNAMICS AND BODY CONTOURING TECHNOLOGIES

M Jewell

Eugene Oregon, USA

Body contouring technologies that are currently FDA-approved utilize energy to affect the subcutaneous adipose tissue (SAT) to improve the appearance of certain body areas, such as the abdomen and flanks.

There appears to be a poor understanding of tissue thermodynamics and how energy-addition technologies function within the mid-lamellar matrix of collagen and adipose tissue. While there have been a variety of claims of 'fat melting', the published data regarding outcomes do not show superiority in outcomes with laser lipolysis (Prado-Sasaki-Jewell). At the same time, adverse events regarding the bulk heating of tissue remain problematic.

Noninvasive technologies that utilize a HIFU-based fractional approach to fat ablation and collagen tightening appear to produce body contour improvement. The basic science data and clinical studies will be discussed.

10

VERITAS BONE PERICARDIUM FOR IMMEDIATE BREAST RECONSTRUCTION: A XENOGRFT ALTERNATIVE FOR ACELLULAR DERMAL MATRIX PRODUCTS

M Mofid, MS Meininger, MS Lacey

La Jolla, California, USA

BACKGROUND : The technical advantages in utilizing human acellular dermal matrix (ADM) products as pectoral extenders in immediate breast reconstruction with tissue expanders or implants are well documented in the medical literature. In this study, the authors examine a commonly used biologic xenograft product that has not yet been described in the medical

Abstracts

literature for use in immediate breast reconstruction to determine whether a lower overall complication rate is identified compared with published data on ADM products.

METHODS: A retrospective multicentre medical record review of data on 54 subjects in 93 tissue expander/implant-based, consecutive, immediate breast reconstructions from three surgeons at different institutions was performed in which Veritas[®] bovine pericardium was used as the biological graft material for the pectoral expander.

RESULTS: Over a 24-month period with an average of 11-month follow-up, complication rates using Veritas[®] in breast reconstruction for seroma formation (7.5%), marginal skin flap necrosis (5.4%), infection (6.5%) and capsular contracture (0%) were found to compare equally or favourably with statistically significant lower overall complications relative to one comparison study and lower rates of marginal skin flap necrosis relative to two comparison studies based on previously published data from multisurgeon studies using ADM products.

CONCLUSIONS: Overall complications were found to be lower with Veritas[®] than ADM products in comparable multisurgeon studies, although this was found to be statistically significant in only one comparison study

Level of Evidence: Level II, therapeutic study.

11

BUTTOCK AUGMENTATION WITH SILICONE IMPLANTS: A MULTI-CENTRE SURVEY REVIEW OF 2226 PATIENTS

**M Mofid, R Gonzalez, S Jorjani, J Abel de la Peña, CG Mendieta,
DM Senderoff**

La Jolla, California, USA

BACKGROUND: The enhancement of buttock volume with gluteal silicone implants has been performed by surgeons for over thirty years. To date, there have been no studies examining complication rates or outcomes of more than single surgeon experiences. Numerous technical differences in how gluteal augmentation surgery with implants is performed also exist and to date surgeon preferences for implant plane, incisional access, types of implants used and the use of drains has not been quantified.

METHODS: A 10-question survey was sent to 83 targeted members of the American Society of Plastic Surgeons requesting information about numbers of cases performed, duration of surgeon experience, implant placement plane and incisional access, implant type, length of typical surgery, use of drains and antibiotic irrigation solution, surgeon satisfaction and surgeon assessment of patient satisfaction and numbers of complications experienced.

RESULTS: Nineteen respondents (25% response rate) provided data on 2226 patients. Thirteen respondents (68%) favoured the intramuscular plane of dissection over the subfascial plane. Preference for incisional access was nearly equally divided between a single incision in the gluteal cleft (10 respondents) and two incisions separated within the cleft (9 respondents). The average surgeon satisfaction with the procedure was rated 7.3/10 and the average surgeon assessment of patient satisfaction was rated 8.5/10. The total number of complications reported was 848 (38.1%). The most common complication reported was incisional separation resulting in a wound 7.9% (n=175). Other common complications included need for implant revision 5.0% (n=111), acute prolonged pain lasting greater than 12 weeks post-operatively 4.2% (n=93), chronic seromas 3.7% (n=82), minor infection not requiring implant removal 3.6% (n= 80) and excessive implant palpability 3.4% (n=75). Implant removal was necessary in 3.8% of patients (n=85) for reasons including major infection, chronic pain and chronic seromas.

CONCLUSION: Gluteal augmentation with silicone implants has gained popularity in the past decade. Despite this, no previous studies have examined multisurgeon experiences with this procedure to determine complication rates or surgeon technical preferences. The authors of this study present data from a survey sent to members of the American Society of Plastic Surgeons experienced with gluteal augmentation surgery. Advances in technique and implant options are needed to improve rates of complications experienced with this procedure.

12

COMPLICATIONS IN BROW LIFT TECHNIQUES: A SYSTEMATIC REVIEW

**S Byun, I Mukovozov, F Farrokhyar, A Thoma
Hamilton, Ontario**

OBJECTIVE: To systematically review the literature to determine the complication rates for a variety of techniques in surgical brow elevation.

METHODS: The databases MEDLINE, EMBASE, CINAHL, LILACS, Web of Science, Cochrane Libraries, controlled-trials.com and clinical-trials.gov, were searched using the terms: "Brow" OR "Forehead", AND "Surgery". From 7920 articles, after deleting duplicates and reviewing abstracts and full-texts by two independent assessors, 80 case series reporting complications on endoscopic or open brow lift techniques were included. Assuming between-study heterogeneity due to the limitations and biases inherent to case series, a random effects model (DerSimonian-Laird method) was used for calculation of weighted proportions (StatsDirect software). Weighted proportions with 95% confidence intervals were reported.

RESULTS: Regardless of the approach, both open and endoscopic procedures were associated with a range of complications. Scar revision and paresthesia are most commonly reported across techniques. Anterior hair-line incision with subcutaneous dissection reports alopecia (8.5%), paresthesia (5.4%), scar revision (2.1%) and skin necrosis (1.8%). Coronal incision with subperiosteal dissection is associated with nerve injury (6.4%), scar revision (2.5%) and hematoma (1.0%). Endoscopic techniques with subperiosteal dissection have the highest number of complications overall, with asymmetry (3.6%), lagophthalmos (2.7%) and recurrence (2.4%) occurring amongst other complications.

CONCLUSION: The literature on brow elevation demonstrates that complication rates vary depending on incision site and plane of dissection. The findings should be interpreted with caution due to the limitations inherent to case-series. A well-designed comparative study is needed to evaluate the complications of surgical brow lift techniques.

13

A PROSPECTIVE SURVEY OF BREAST REDUCTION SCARS: A PATIENT'S PREFERENCE

**CP White, AE Kattan, F Farrokhyar, NM Hynes
Hamilton, Ontario**

Reduction mammoplasty is one of the most frequently performed procedures in plastic surgery today. Studies have shown that scarring is one of the main causes of postoperative dissatisfaction. Many different techniques have been designed to minimize postoperative scarring. To our knowledge, this is the first study designed to prospectively evaluate the patients' preference with regards to postoperative scars.

To prospectively evaluate patient preferences between the three most common breast reduction scar patterns (Wise, vertical and horizontal) and determine whether a significant difference exists between these preferences.

Patients being referred for breast reduction surgery for symptomatic relief will be prospectively surveyed. Ninety-two consecutive patients referred to the senior author (NH) for breast reduction surgery for symptomatic relief will be included in the study. Each patient will be shown line drawings and postoperative photographs of the three different breast reduction techniques. A modified Likert scale questionnaire will then be administered. Participants will then be asked to rate the scars from 1 to 10 (1 = unacceptable and 10 = acceptable).

Our results will be presented using a multiple regression analysis. The mean, standard deviation, median and minimum and maximum score for each type of scar will be reported. Generalized linear regression will be used to determine which scar is preferred by patients after adjusting for patients factors (age, weight, height and bra size). A P-value of 0.05 will be considered statistically significant.

14

RHINOPLASTY IN THE BURNED NOSE

J Bouguila, R Viard, C Ho Quoc, JL Foyatier

Sousse, Tunisia

INTRODUCTION: The nose is particularly exposed to facial burn accidents due to its situation and is usually accompanied with deformities of other organs of the face.

The aim of our study is the discussion of how rhinoplasty can be done safely in these victims with pleasing outcome.

MATERIALS AND METHODS: We present 10 cases, with complete or subtotal nasal burn. Classic aesthetic rhinoplasty operations were performed to create a better appearance and correct any internal or external deviations.

Standard view photographs were taken before and after operation. Patients and surgeon satisfaction were recorded.

RESULTS: Ten patients (nine females, one male) whose noses had burn scars or had been grafted or reconstructed, were operated on. Patient age ranged

from 18 to 46 years. We performed the classic rhinoplasty operation to repair any respiratory or aesthetic problems due to shrinkage of soft tissues.

These procedures are carried out under severely burned skins, or previously grafted and reconstructed noses. Cases were followed for a period of about nine months.

The cosmetic results, discussed by three surgeons and subjective patient feelings, were considered satisfactory in 90% of cases.

DISCUSSION: Nasal skin flaps should be thick enough to prevent probable necrosis in the distal part, and no skin thinning procedure should be performed.

The other problem is the rigid covering grafted or scarred skin, which is less pliable to take the form of the modified osteocartilagenous skeleton. Rhinoplasty seems to complete and improve the results of the standard surgical approach in the burned face.

AUTHOR INDEX

A	Few J.2	Jorjani S. 11	Meininger MS10	V
Ahmad J.4	Foyatier JL14		Mofid M. 10,11	Viard R.14
Abel de la Peña J.11		K	Mukovozov I12	
	G	Kattan AE13		W
B	Gomez Jimenez J6	Khan A4	P	White CP.....13
Bouguila J.14	Gonzalez R.11		Peterson B 3	Z
Byun S12		L		Zins JE1
	H	Lacey MS 10	S	
C	Ho Quoc C.14	Lista F. 4	Senderoff DM11	
Carman W5	Hynes NM13		T	
	J	M	Thoma A12	
F	Jewell M. 7,8,9	Mendieta CG.....11	Tutino R. 4	
Farrokhyar F. 12,13				