INTRODUCTION: Radiotherapy is known to associate with increased risks of post-operative complications, especially in implant based breast reconstruction. In addition to vascular compromise and compromised wound healing, radiation also results in significant tissue atrophy. This complicates subsequent surgeries, including tissue expander exchange to implant, fat grafting, nipple reconstruction, and implant exchange. Fat grafting in irradiated tissue has shown in vitro and vivo to improve tissue quality. However, fat grafting in the setting of irradiated tissue expander/implants may increase implant related complications including infection, exposure, and implant loss. In this study we aim to evaluate the safety profile and outcomes of fat grafting before tissue expander exchange in irradiated patients.

METHODS: All Patients with tissue expander based reconstruction post radiation therapy who received fat grafting either before or after tissue expander exchange between January 2014 to December 2016 were included. Demographics, intraoperative details and outcomes including surgical complications and revision surgeries were reviewed.

RESULTS: 8 consecutive patients with implant-based reconstruction who underwent fat grafting after radiation were included in the study. 5 patients had fat grafting before tissue expander exchange. 3 patients had fat grafting after permanent implant placement. Average injection volume is 40 cc per breast. There was no surgery-related complication from any of the stages, tissue expander placement, intermediate fat grafting, and tissue expander exchange. Patients who had fat grafting prior to exchange appeared to have a softer and thicker soft tissue envelope.

CONCLUSION: Fat grafting in irradiated breasts prior or after tissue expander exchange is safe and may improve the tissue quality of the mastectomy skin. As radiation induced tissue atrophy progresses over time, we recommend fat grafting prior to the tissue expander exchange to introduce new healthy cell to build up mastectomy flap prior to permanent implant exchange. This may decrease complications and optimize the result of the permanent implant placement.

A Practical Way for Deciding the New Location of the Nipple in Reduction Mammaplasty, Equilateral Triangle Concept

Presenter: Alp Ercan, MD
Affiliation: Istanbul University Cerrahpasa Medical Faculty, Istanbul

INTRODUCTION: The concept of the ideal breast is questioned throughout the ages by the sculptors, painters and finally by the plastic surgeons. The most argued theory is an equilateral triangle joining the sternal notch and two nipples measuring 19–21 cms. Even though it is used in augmentation procedures, this concept is underutilized in reduction mammaplasty or mastopexies. Breast reshaping procedures use different pedicles for carrying nipple areola complex (NAC) to its new position. Whichever pedicle we use the most important step is the new place of the NAC. In the standard marking we draw a meridian starting from midpoint of the line joining notch and AC (acromioclaviculay) joint bisecting the breast. Then we move the nipple on that imaginary meridian to its new place. The problem is, on big sized breasts where nipples are more lateral then normal and in overweight patients, it is harder to correctly place that meridian confusing non-breast lateral tissue with the actual breast itself, drawing that line laterally then it should be. This can cause laterally placed nipples post-op. To overcome this problem, one can utilize equilateral triangle concept in reduction and place the nipples on an imaginary equilateral triangle which two sides are notch-new nipple and one side is between the new nipples.

METHODS: 12 patients with laterally placed nipples were operated by the author between January 2015 and September 2016. 2 inferior and 10 superomedial pedicled breast reductions were performed. New nipple-notch distances were between 21–23 cms. During the marking imaginary meridian line was drawn first then triangle was utilized and distance between the two possible nipple placements measured. The mean follow-up after the operation was 6 months (3–11 months)

RESULTS: The mean distance between two possible nipple placements was 2.1 cm (1–4 cms). 10 of the 12 patients were highly satisfied with the results. The reason for the dissatisfaction of the other patients were not related to placement of their nipples. None of the patients complained of a medially placed nipple.

CONCLUSION: Using the equilateral triangle concept is an quick way to doublecheck the new
location of the nipple and can be implemented in the standard marking easily. It is an effortless method to avoid laterally placed nipples.

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Occipital Migraine: A Vascular Approach

Presenter: Edoardo Raposio, MD, PhD, FICS

Co-Authors: Francesco Simonacci, MD; Nicolo’ Bertozzi, MD; Elisa Bellini, MD

Affiliation: Parma University; Parma University Hospital, Parma

INTRODUCTION: Following the pioneering work of Guyuron et al. in 2001, an impressive body of literature demonstrated that the inflammation of peripheral nerves caused by chronic compression from surrounding structures (e.g., muscles, blood vessels) might trigger migraines. The currently adopted surgical procedure for the treatment of the occipital trigger site is performed under general anesthesia. An occipital scalp incision is followed by extensive undermining, sectioning of the occipital muscles, removal of a small portion of the semispinalis capitis muscle, and coverage of the great occipital nerves with a subcutaneous flap. In this study, we report our experience with a minimally invasive surgical procedure for occipital migraine headache treatment.

METHODS: From June 2011 to September 2016, we operated on 42 patients with drug-resistant occipital tension-type or migraine headaches under local anesthesia. A 3 cm skin incision was performed at the superior nuchal line either unilaterally or bilaterally, depending on the patient’s symptoms. Thirty-two patients subsequently underwent selective multiple myotomies along with occipital artery ligation resulting in the decompression of the lesser and greater occipital nerves, and ten patients had occipital artery ligation only.

RESULTS: Mean follow-up time was 19 months (range: 3–63 months); 93.7% of patients had a positive response (85.5% of patients had complete symptom resolution; 8.2% reported a significant reduction in headache intensity, frequency, and duration; and 6.3% were refractory to surgery). Nevertheless, patients who had occipital artery ligation only had an 80% complete response rate, while significant improvement occurred in 20%. Temporary anesthesia was the main reported side effect and lasted for an average of 163 days. No serious early or late complications were observed.

CONCLUSION: Our findings confirmed data previously reported in the literature, both strengthening the evidence for a peripheral mechanism in migraine headaches and supporting Wolff’s vascular theory of migraine. Indeed, abnormal occipital arteries (exhibiting either ectasia or a coiling pattern) around the cited nerves were found during surgeries, the ligation of which resulted in migraine resolution. Our minimally-invasive procedure proved to be effective for the treatment of occipital migraine. Since no serious complications or side effects were observed, this procedure can be recommended to patients with severe forms of migraine and symptoms of drug dependency.

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Does Proximity of the Primary Tumour to the Lymph Node Basin, in Patients with Malignant Melanoma, Influence the Chance of Sentinel Node Positivity?

Presenter: Debbie Hunt, MSc