Having children and effects of pregnancy on a woman's appearance motivate many women toward cosmetic surgery.

**Background:** Proper patient selection is among the major determinants of satisfaction, or the lack thereof, following esthetic surgery. Effective communication between patient and surgeon is also crucial. Understanding the patient's psychosocial attributes and circumstances assists the surgeon with both selection and communication.

**Objective:** To shed light on those psychosocial parameters that foster interest in esthetic surgery. In this way, the authors hope to assist the surgeon to better evaluate patients as candidates for surgery.

**Design/Participants:** The paper reports the results of a psychosocial polling instrument administered to 3500 Norwegian women. The women were randomly selected from the female population of the 2 most northern Norwegian towns and were restricted to the 18 to 35 age group.

**Methods:** Data were obtained from a questionnaire mailed to the selected women. With 208 questionnaires returned as a result of inaccurate addresses, only 3292 questionnaires were delivered to the intended subjects. Variables related to body dysmorphic disorder, personality attributes, self-esteem, body image, social history, eating disorders, and socio-demographic circumstances, among others, were measured. They were then analyzed to determine the possible correlation with the central question concerning "interest in cosmetic surgery." Statistical methods were used to estimate significance.

**Results:** 1862 of 3292 (56%) subjects returned completed questionnaires. Variables that were positively correlated with interest in cosmetic surgery were body dysmorphic-like symptoms, body image orientation, having children, being teased for appearance, knowing someone who had cosmetic surgery, and being recommended for cosmetic surgery. Variables with negative correlation were: agreeability, body image evaluation, higher education level, and quality of relationship with parents.

**Conclusions:** This study confirmed widely accepted predictors of interest in cosmetic surgery such as body dysmorphic disorder, low self-esteem, poor body image, eating disorders, and specific personality traits. New variables, such as having children or a history of teasing, were also positive predictors. Higher levels of education and good relationship with parents were negative predictors.

**Reviewer's Comments:** Potential criticisms of the study are myriad, and beyond this brief review. It offers little of direct and immediate applicability to clinical cosmetic practice. However, it does remind us that some important truths are worth emphasis. Most patient dissatisfaction with cosmetic surgery is based on failures of communication and patient selection, and not on technical faults. While personality and psychological testing may be impractical and even offensive, some form of evaluation, beyond just the anatomical, is invaluable. Concepts of personality and circumstances, as enumerated in this paper, assist the clinical surgeon, even in an unstructured interview, to evaluate patients as candidates for cosmetic surgery. (Reviewer-Norman V. Godfrey, MD).

© 2010, Oakstone Medical Publishing

Keywords: Cosmetic Surgery, Patient Selection, Body Dysmorphic Disorder

Print Tag: Refer to original journal article
Objective: To analyze the results of oncoplastic breast surgery.

Background: Plastic surgery and oncoplastic breast surgery can be combined to achieve adequate excision margins and good esthetic outcomes for breast cancer patients.

Design: Retrospective study.

Participants/Methods: 540 consecutive patients who underwent primary oncoplastic surgery for breast cancer were analyzed. Overall and disease-free survival and local recurrence were evaluated. Esthetic results were analyzed on a 5-point grading system by the surgeon, a nurse, and a layperson.

Results: Median age was 52 years and mean follow-up was 49 months. The major indication for oncoplastic procedures was tumor location, alone or in combination with volume. Most patients had B- or C-cup breasts. An inverted-T technique with superior pedicle was the most common surgical technique used, although techniques varied based on tumor location and size. Symmetrizing procedures were immediately performed in 46.1% of patients overall. But in the latter period of the study, they were rarely performed until 6 months after the oncoplastic surgery because of the unpredictable effect of radiotherapy. In total, 90.3% of patients had a satisfactory esthetic outcome at 5 years (ratings, 1 to 3). Complications were seen in 16.3% of patients, but only 3.3% required surgical management. Local recurrence occurred in 6.8%; the 5-year overall survival rate was 92.9%, with distant disease-free survival at 87.9%.

Conclusions: Oncoplastic breast surgery is safe with recurrence and survival rates similar to breast-conserving therapy. Satisfactory esthetic outcomes are possible, reducing the need for mastectomies.

Reviewer's Comments: Oncoplastic breast surgery is becoming more popular. It is a catch-phrase that can mean different things to different people. However, the authors of this paper make it clear that they mean synchronous plastic surgery with oncological surgery. I believe that oncoplastic surgery, by definition, should involve a plastic surgeon's expertise to provide the best esthetic outcome possible. The authors provide data on a large number of oncoplastic breast surgeries over a 22-year period. Their techniques and approach to these patients evolved over time, but they were able to demonstrate satisfactory esthetic and oncologic results. It is interesting to note how their practice regarding symmetrizing procedures changed after the initial 10 years. The unpredictable effect of radiation and weight changes during treatment led them to defer these procedures until 6 months after the end of treatment. This approach makes sense, but for some patients is not always possible. Some patients with very large breasts can be very uncomfortable with marked asymmetry and prefer a symmetrizing procedure at the same time. Other patients are unwilling to have a second operation if it is not necessary from an oncologic standpoint. Oncoplastic breast surgery is another area in which plastic surgeons can continue to help improve the quality of life for breast cancer patients. (Reviewer-Christine Rohde, MD).
The incidence of lymphedema in patients undergoing delayed free tissue transfer reconstruction is low overall and is not affected by recipient vessel used, radiation history, or lymph node removal.

**Background:** Lymphedema may occur in those patients who undergo mastectomy and lymph node sampling.

**Objective:** To answer in a retrospective clinical evaluation whether type of reconstruction, recipient vessels, history of radiation, or lymph node sampling affect the incidence of lymphedema, and whether free tissue reconstruction improves the condition.

**Participants:** 482 patients between January 1998 and November 2007 who underwent delayed autologous breast reconstruction.

**Methods:** Patients were grouped into whether or not they had lymphedema at the time of delayed reconstruction. Further division was based on whether their reconstruction was via free or pedicled flap. Free-flap reconstructed patients were divided into 2 groups based on the use of either the thoracodorsal or internal thoracic artery. Having a nodal dissection or radiotherapy was noted.

**Results:** 432 free TRAM or DIEP flaps were performed. Fifty pedicled latissimus flaps were performed. Overall, 38 of 482 patients had preexisting lymphedema; 3.6% of patients developed lymphedema in the delayed reconstruction group. The choice of recipient vessels or undergoing reconstruction with a latissimus flap did not produce a statistically significant difference in lymphedema. There was no statistically significant difference in the development of lymphedema between those who did or did not undergo radiation therapy or nodal evaluation. Of the 38 patients who already had lymphedema prior to reconstruction, 37 underwent free-flap reconstruction. Nine patients showed improvement of lymphedema, 29 showed none, and 0 worsened.

**Conclusions:** There is no statistical difference in the development of lymphedema based on the type of delayed reconstruction performed no matter the recipient vessel used, previous radiation, or nodal alteration. It is possible that free tissue transfer may improve lymphedema in those patients who have it at the time of reconstruction.

**Reviewer's Comments:** Lymphedema can be a debilitating result of breast oncology procedures. This paper counters many of the current suppositions of breast reconstruction. It shows no statistically significant difference in the incidence of lymphedema based on the recipient artery used. This goes against intuitive sense considering that to expose a thoracodorsal artery, one must dissect in the axilla and possibly cause increased trauma to the lymphatics. Also, a history of radiation or sentinel/axillary node dissection did not affect the incidence of lymphedema, which again goes against intuitive thinking. Finally, using a free flap may improve preexisting lymphedema. The author admits one of the weaknesses of the paper is that there is no good objective way to quantify improvement or worsening of lymphedema. But even so, the idea that free tissue reconstruction might improve the condition is encouraging, as conservative measures and lymphatic microsurgical techniques often fail. The authors should be commended for their extensive data collection and for providing a study that should be expanded to answer the question of how to improve lymphedema surgically. (Reviewer-Jerome D. Chao, MD).

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**Keywords:** Breast Reconstruction, Post-Mastectomy, Lymphedema, Radiation Therapy

**Print Tag:** Refer to original journal article
Delayed-immediate reconstruction provides advantages of immediate reconstruction while avoiding some radiation-related problems.

**Background:** Breast reconstruction results can be negatively impacted by radiotherapy. For some patients, it is not known until after the mastectomy whether a patient will need radiotherapy. However, there are disadvantages to performing a purely delayed breast reconstruction. In 2002, Dr Kronowitz of MD Anderson Cancer Center implemented a "delayed-immediate breast reconstruction" technique for patients at increased risk for needed post-mastectomy radiation.

**Objective:** To highlight the technique and timing of delayed-immediate breast reconstruction.

**Design:** Review of technique.

**Methods:** Indications for delayed-immediate reconstruction include T2 tumor, multicentric disease, lymph node positivity, and invasive disease with extensive ductal or lobular carcinoma in situ. Patients undergo skin-sparing mastectomy with placement of a subpectoral tissue expander that is expanded as close to fill volume as possible. After review of permanent sections, if the patient does not require radiation, definitive breast reconstruction is performed about 2 weeks later. If the patient does need radiation, the tissue expander is deflated, the patient receives radiation therapy, and the expander is then re-inflated within 2 weeks after the end of radiation. Delayed reconstruction is performed within 3 months.

**Results:** 77 patients underwent this protocol from 2002 to 2008. Most of the patients had stage II cancer. In total, 38% of patients needed radiation after stage I of the technique. Tissue expander loss occurred in 11 of 77 patients (14%). Mastectomy skin necrosis was the most common reason for tissue expander loss. On long-term clinical follow-up, there was no evidence of radiated breast or breast skin contracture.

**Conclusions:** Delayed-immediate reconstruction allows patients to have the benefits of skin preservation of immediate reconstruction while avoiding the negative effects of radiation delivered after breast reconstruction. It has long been known that radiation to a reconstructed breast can affect the esthetic outcome. Radiation increases risks of significant deformity in both implant and autologous reconstructions. Whether reconstruction should always be delayed if there is a possibility of the need for radiation is a point of debate. However, it is often not known at the time of mastectomy whether a patient will need radiation, and immediate reconstruction has advantages over delayed reconstruction. Dr Kronowitz has developed a technique that combines the advantages of immediate reconstruction with the advantages of delaying reconstruction until after radiation. With the cooperation of radiation oncology, he is able to achieve good cosmetic results, presumably better than if the reconstruction was irradiated. The biggest obstacles for more widespread adoption of this protocol are the timing and availability of operating room time and patient acceptance of additional procedures. Despite these considerations, he is to be congratulated for this well thought out, well-planned approach to maximize results. (Reviewer-Christine Rohde, MD).

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Keywords: Breast Reconstruction, Radiation, Breast Cancer

Print Tag: Refer to original journal article
While highly sensitive, MRI has a low predictive value in diagnosing implant problems in patients experiencing capsular contracture.

**Background:** The FDA mandates MRI screening of patients with silicone implants every 2 years beginning 3 years after initial breast augmentation with silicone implants. MRI has been shown to be the most accurate monitoring technology available in asymptomatic patients for screening.

**Objective:** To look at the effectiveness of MRI scans to diagnose silicone implant issues in patients with all grades of capsular contracture.

**Design:** Retrospective review.

**Participants/Methods:** 171 patients were studied over an 8-year period. All patients had physical exams (PE) performed documenting Baker grading of the capsular contracture. In total, 73% had mammograms also performed. MRI with a dedicated breast coil was obtained in 85 patients. The group of patients who had PE plus mammograms was compared to the group that had MRIs. Subsequent operative exploration was used to determine the accuracy of the preoperative assessments. Duration of implantation was similar between the groups with a mean of 20 years. Gel bleed was not considered an implant rupture.

**Results:** 65% of the PE plus mammogram patients (group I) had Baker III and IV capsular contracture as opposed to 55% of the MRI group (group II). Nearly 80% of group I patients also had symptoms as opposed to 60% of group II. The preoperative accuracy between the 2 groups in detecting rupture was calculated to be 78% versus 76%. Diagnostic test parameters of sensitivity, specificity, positive predictive value, negative predictive value, and false positive and false negative rates were calculated. Higher sensitivity for rupture was demonstrated for patients who underwent MRI scans but lower specificity and high false positive rates.

**Conclusions:** Beyond PE and mammograms, MRI scans are of limited value in helping determine treatment options for symptomatic patients with capsular contractures.

**Reviewer's Comments:** True rates of capsular contracture and implant rupture are notoriously difficult to accurately assess. Biased reporting, loss of patients to follow-up, and implant revisions for other reasons can make the data difficult to compare from one study to the next. That's why the use of an objective study like an MRI was thought to help truly assess implant rupture rates moving forward. But these authors show that, in patients with capsular contractures, MRI scans really add nothing in their ability to detect rupture rates over the less costly methods of PE with mammography. With time, more patients will develop contractures and symptoms. Since implants have limited longevity, why bother with an MRI if a patient has implants that are more than a few years old, has symptoms, and has capsular contracture. The patient should probably just proceed to have a capsular procedure and an implant exchange. (Reviewer-Robert T. Grant, MD).

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Keywords: MRI, Silicone Implants, Implant Rupture

Print Tag: Refer to original journal article
**Background:** With the rising popularity of bariatric surgery, an increasing number of patients are presenting to plastic surgeons for body contouring procedures following massive weight loss. These patients often have multiple complaints involving different anatomic areas that cannot all be addressed in a single procedure, and thus they may wish to undergo multiple procedures at the same time to decrease recovery times and costs. Factors to consider when combining procedures include a patient's overall medical condition, a surgeon's experience, length of the planned surgery, vectors of tension, and costs to the patient.

**Objective:** To quantify the authors' experience with a large number of weight loss patients who underwent combined body contouring procedures to produce an evidence-based analysis of staging and outcomes.

**Design:** Between 2005 and 2009, patients were prospectively enrolled in an institutional review board-approved clinical database.

**Participants:** The main inclusion criterion for this study was for a patient to have a weight loss of at least 50 pounds. Six major categories of procedures were evaluated: abdomen, breast, medial thigh lift, buttock and lateral thigh lift, upper back lift, and brachioplasty.

**Methods:** Surgeries were performed at a center whose operative team included a senior surgeon, a dedicated body contouring fellow, a physician assistant, and often a plastic surgery resident.

**Results:** The study included 609 patients who underwent 661 surgeries involving 1070 body contouring procedures. As the number of procedures performed at a single surgery increased, the length of hospital stay increased ($P < 0.001$). Rates of seroma, wound dehiscence, infection, and necrosis increased with the number of procedures performed, whereas hematoma rates did not. While the number of minor complications increased as more procedures were performed in a single surgery, there was no increase in the per-procedure complication rate. Sixty patients had a second-stage surgery, and these surgeries had similar complication rates and lengths of hospital stay. Major complications did not increase when multiple procedures were performed in a single surgery.

**Conclusions:** The authors found that multiple procedures can be performed in a single surgery in carefully selected patients while maintaining low rates of major complications. The authors also concluded that staging of procedures in multiple surgeries is a reasonable alternative for patients who are not ideal candidates for combined procedures, or who wish to have procedure combinations that cannot be performed together safely.

**Reviewer's Comments:** This is a very useful article as it gives clinically relevant outcomes data and guidelines from a high-volume body contouring center. The results give additional support to the concept that in carefully selected patients multiple procedures can be performed safely in a single surgery and that when doing so, the per-procedure complication rate does not increase. (Reviewer-Jeffrey A. Ascherman, MD).

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Keywords: Multiple Procedures, Weight Loss Surgery, Body Contouring

Print Tag: Refer to original journal article
Facial Asymmetry and Nasal Deviation--We Still Don’t Know

Asymmetric Facial Growth and Deviated Nose: A New Concept.
Hafezi F, Naghibzadeh B, et al:
Ann Plast Surg 2010; 64 (January): 47-51

Facial asymmetry may be more prevalent in patients with deviated noses.

**Background:** Many surgeons would rate correction of nasal deviation as among the most difficult challenges in nasal surgery. Accompanying facial asymmetry complicates this yet more. Detailed preoperative assessment of nasal deviation, facial asymmetry, and their relationship assists the surgeon in operative planning and execution.

**Objective:** To characterize the interplay of nasal deviation and facial asymmetry. This paper also offers the authors’ conjecture regarding the cause.

**Design/Participants:** Retrospective review of pre- and postoperative clinical photographs of 671 consecutive rhinoplasty patients. The cohort was comprised of the authors' rhinoplasty patients between 2002 and 2008 excluding those with a history of facial trauma or nasal fracture.

**Methods:** Frontal photographs provided all the data. To assess facial symmetry, distances from lateral canthi to the oral commissures were measured. To assess nasal deviation, distances from midline at the radix to zygomatic lateral prominences were measured. The differences between measurements for left and right side were calculated.

**Results:** 519 of 671 patients (77%) had non-deviated noses and symmetric faces, by these measures. In total, 88 (13.0%) patients had deviated noses and asymmetric faces, 38 (5.6%) patients had deviated noses with symmetric faces, and 27 (4.0%) patients had non-deviated noses with asymmetric faces. Surgical revision rate for deviated noses was 28%.

**Conclusions:** The incidence of facial asymmetry was higher in the deviated nose population (88 of 126 [70%]) than in the non-deviated nose group (27 of 545 [5%]). The authors suggested unilateral orbital and midface growth retardation as the etiology of deviation and asymmetry.

**Reviewer's Comments:** For a publication from a major plastic surgical journal, this paper is thin at best. Its terminology is misused and its methods are inadequate. The widely accepted definition of 'rhinion' is the caudal terminus of the suture line uniting the paired nasal bones. The photographic illustration of the measurement described as 'rhinion to lateral eminence' shows that the authors measured the distance from the midpoint of the nasal dorsum at the level of the radix to the lateral eminence. What is more, assessment of nasal deviation with just radix to zygomatic eminence is inadequate. The lower nose is often more markedly deviated than the bridge. Distance from lateral canthus to oral commissure makes one assessment of facial height but does not assess skeletal structure or facial width. On this basis, this reviewer is less than impressed with the potential validity and utility of the conclusions. Moreover, the authors' postulations regarding possible causes are in no way supported by any of the observations offered. This reviewer suggests that, unless a limited bibliography is needed, the reader's time may be better spent on other papers. (Reviewer-Norman V. Godfrey, MD).

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**Keywords:** Asymmetric Face, Deviated Nose, Genetic Control

**Print Tag:** Refer to original journal article
Polydioxanone Plate Serves as an Excellent Absorbable Intraseptal Splint

Reconstruction of the Nasal Septum Using Polydioxanone Plate.
Boenisch M, Nolst Trenité GJ:
Arch Facial Plast Surg 2010; 12 (January-February): 4-10

Even with polydioxanone splinting, caudal and dorsal borders of the reconstructed septum should be of intact single pieces.

Background: Ablative septal surgery removes deviations, but does not replace lost support or straighten elements. Retained septal tissues resist straightening unless their continuity (and therefore their stability) is disrupted. The elusive goal is septal rectification without loss of stability.

Objective: To offer polydioxanone plate as a temporary implantable support for nasal septal cartilage. It enhances structural stability and then resorbs when wound healing provides adequate strength.

Design: Topic and retrospective case series review of biologic behavior of polydioxanone alloplast.

Methods: Important elements of the surgical procedure are: (1) complete and intact removal of the quadrangular cartilage following its separation from soft tissue and skeletal attachments; (2) tracing of the exact shape and dimension of the intact, but distorted quadrangular cartilage onto a polydioxanone plate that is then cut to that exact shape; (3) division of the distorted cartilage into straight elements with incisions along the lines of angulation; (4) application of straight, flat elements to the polydioxanone plate with mattress sutures of 6-0 polydioxanone to create a "compound graft;" (5) replacement of the compound graft with suture fixation to the upper laterals and nasal spine periosteum; and (6) transseptal through-and-through suture of the mucoperichondrial flaps back to the compound graft.

Results: Since 1996, the authors have performed 396 external septoplasties with polydioxanone plate. No immediate complications occurred. Straight septum was achieved in 93%. Eighteen patients (4.5%) underwent revision to correct re-deviation or polly beak deformity. In total, 93% of patients reported airway improvement. Forty-seven patients underwent septal reconstruction with auricular cartilage compound grafts. They had equally good results.

Conclusions: The results of extracorporeal septoplasty with polydioxanone splinting were vastly superior to their earlier efforts without splinting. The authors expanded its use to include septal cartilage reconstruction using compound grafts of polydioxanone plate and auricular cartilage. They emphasize a key technical point: dorsal and caudal septal borders must be reconstituted from single straight cartilage pieces. A 'joint' at the septal angle is acceptable, but the dorsal and caudal "reaches" must be single pieces.

Reviewer's Comments: Disappointments in the paper were only minor. The authors’ extremely high complication rate with unsplit external septoplasty is inconsistent with results reported by Gubisch. The authors fail to specify the thickness of the polydioxanone plate. It has been offered in 0.25- and 0.5-mm thicknesses. They do not discuss perforated versus solid plate. The photographs in the paper show perforated plate, but others have used solid. Other authors have stressed that polydioxanone plate be used on only one side of the cartilage mass. This was not mentioned in this paper. (Reviewer-Norman V. Godfrey, MD).

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Keywords: Septoplasty, Extracorporeal Septoplasty, Implantable Septal Splint

Print Tag: Refer to original journal article
There's Another New Liposuction Technique Coming -- This One's Electric

A Safety and Feasibility Study of a Novel Radiofrequency-Assisted Liposuction Technique.
Blugerman G, Schavelzon D, Paul MD:

Plast Reconstr Surg 2010; 125 (March): 998-1006

Liposuction with electric current is the newest version of fat removal -- it works but it's early.

Background: Liposuction has perennially been one of the most popular cosmetic surgical procedures. It is safe and effective. Its use is limited, however, in people with loose skin. Ultrasonic and laser liposuction have been suggested as methods to remove fat with simultaneous skin tightening. The new BodyTite device is supposed to destroy fat and tighten skin.

Objective: To evaluate the feasibility, safety, and efficacy of a novel radiofrequency device for radiofrequency-assisted liposuction.

Participants: 23 patients underwent radiofrequency-assisted liposuction with the BodyTite device. The degree of skin tightening was assessed 6 and 12 weeks postop. The suctioned fat was examined histologically.

Methods: The method of anesthesia was not described. A tumescent solution was used and the BodyTite device was used. This generates a bipolar alternating electric current. An insulated probe is inserted through 3-mm incisions and held in place for 2 minutes while current is applied. A second probe is held against sterile gel on the skin, completing the electrical circuit. The skin temperature is monitored by a computer, which cuts off energy when the skin gets too hot. The internal probe is first used to heat up fat at a depth of 3 cm to "allow uniform heating of the deep fat," although the end point is not described. The probe is then moved to 1 cm beneath the skin to heat up and tighten it. It is held at this level until the skin reaches 42° Celsius for 2 minutes. The current extends to an area of 10 x 15 cm and then a new zone is treated. When all the tissue is treated, traditional liposuction is used to remove the fat.

Results: 2.4 liters of fat were aspirated on average. Histology was not presented in a statistically meaningful way, but simply was described for representative patients. Skin tightening was measured by checking distances between skin landmarks in 3 locations. Skin tightening was measured at 9% to 42%.

Conclusions: Radiofrequency-assisted liposuction is safe and effective.

Reviewer's Comments: This is a new technique and despite the lack of meaningful data, it is already being performed in the United States. The sample size in this paper was very small and there was much variation in the procedure, which negates meaningful scientific evaluation. It is impossible to determine whether it is the liposuction or the radiofrequency that tightens the skin. In order to determine that, a study comparing radiofrequency-assisted liposuction with traditional liposuction will need to be performed. To make the study scientifically valid, rectangular tattoo marks can be placed prior to the procedure and the area of the rectangle can be measured before and after surgery. Skin tightening is a 3-D-- not 2-D--phenomenon. This study is poorly controlled and scientifically flawed, and therefore scientifically invalid. (Reviewer-Arthur W. Perry, MD).

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Keywords: New Liposuction Technique, Radiofrequency

Print Tag: Refer to original journal article
Properly designed, partial excision of a tattoo may yield an equally acceptable tattoo.

**Background:** Tattooing is more widely practiced in Western society than it has been previously. As a result, surgeons more commonly encounter tattoos in surgical fields.

**Objective:** To suggest that common sense supplemented by novel surgical tactics will enable surgeons to respect the patients’ tattoos without compromise of surgical objectives.

**Design/Methods:** This paper is a topic and literature review regarding surgical procedures in tattooed areas. While not a study proper, it offers guidelines based on available literature and the authors’ experience. Although data are of varying equivalence, it appears that in current Western society 10% to 16% of adolescents and 3% to 24% of the general population have ≥1 tattoo. We surgeons sometimes fail to appreciate that many patients truly cherish a tattoo, particularly when it commemorates a major life event, relationship, or individual.

**Results:** The authors found that surgical procedures involving skin excision presented some different implications for tattoos than procedures that did not involve skin excision. With planned skin excision, they recommend 4 possible approaches: (1) alteration of excision lines to avoid the tattoo; (2) total removal of the tattoo; (3) partial removal of the tattoo (with the possibility of re-tattooing); and (4) transposition of adjacent skin, making use of the tattoo. Where no skin excision is indicated, recommendations are: incision placement to avoid the tattoo and incision placement at a linear border of, or within, the tattoo.

**Conclusions:** A tattoo in the operative field does not dictate loss or disfigurement of the tattoo. Creative use of the authors’ recommendations may permit uncompromised surgery that respects the tattoo.

**Reviewer’s Comments:** This reviewer noted a number of additional details within the text. They are worth emphasis and are: (1) document the location and detailed appearance of tattoos preoperatively with good photographs; (2) document discussion and decisions taken with the patient regarding surgical management of the tattoo; (3) when total or partial tattoo excision is unavoidable, consider re-tattoo to restore acceptable appearance. This should be discussed prospectively. Photographic record of the original tattoo may be crucial; (4) when partial tattoo excision is unavoidable, design the excision to respect tattoo landmarks. If performed in a logical manner, this will not compromise surgical objectives, but can leave a tattoo that, although changed, is still pleasing; (5) often, wound edge advancement and flap transposition may alter tattoo configuration. Design this with attention to tattoo landmarks. Supplement this with re-tattoo, as needed; and (6) consider possible use of linear elements in a tattoo as sites for an incision line. This may better camouflage the resulting scar. Adjunctively, additional tattooing over the scar may better incorporate it into an existing figure. (Reviewer-Norman V. Godfrey, MD).

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Keywords: Tattoo, Esthetic, Scar, Incision, Operative Field

Print Tag: Refer to original journal article
Most patients who undergo breast conservation surgery report a satisfactory esthetic result.

**Background:** Breast conservation therapy is an acceptable approach to breast cancer treatment. While the incidence of recurrence and postoperative mortality are not significantly higher than with mastectomy, the results of this approach are often suboptimal from a cosmetic standpoint. Up to 30% of patients who undergo breast conservation therapy have an unsatisfactory result. This, coupled with the frequent requirement of adjunctive radiotherapy, presents a reconstructive challenge to the plastic surgeon.

**Objective:** To evaluate patients who have undergone breast conservation treatment.

**Design:** Retrospective review.

**Participants/Methods:** 141 patients who underwent breast conserving cancer treatment since 1991 were studied. A 5-point scale was devised recently to describe the degree of resultant deformity and required interventions.

**Results:** Patient satisfaction rates with the appearance of their breasts are reported to be nearly 95% at 1 year and 89% at 5 years. In total, 20% of patients required revision, and 6% required a third procedure to correct their deformity.

**Conclusions:** Breast conservation surgery can lead to acceptable cosmetic results, whether alone or with secondary revisions. However, the need for revisional surgery and the complications associated with additional procedures suggest that the oncoplastic approach to breast conservation is favorable for an optimal long-term result.

**Reviewer's Comments:** There is as of yet no well-established grading system for breast deformity following breast conservation surgery. The authors' grading system is a useful guideline for the approach to revisional surgery for these patients. The authors do not, however, supply any data on the nature of the masses that were being excised during the patients' primary procedures (ie, how does size of the mass correlate with the resultant defect? and how does operator variability among breast surgeons play into the final result?) What is underestimated in this report is the fact that many women are not offered the option of breast reconstruction following mastectomy, therefore they consider the acquired deformity a fair exchange for still having a breast. This issue must be examined when considering the sequelae of breast conservation therapy in terms of deformity or defect. To complete the discussion on a grading system for these patients, it would also be important to establish preoperative guidelines by which certain patients should consider mastectomy and reconstruction based solely on the expected deformity associated with lumpectomy and radiation alone. (Reviewer—Robert T. Grant, MD.)

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Keywords: Reconstruction After Breast Conservation Surgery

Print Tag: Refer to original journal article
Using validated questionnaires, it was shown that oncoplastic partial breast reconstructive surgery had a positive impact on quality of life and self-esteem of women undergoing breast-conserving treatment.

**Background:** Oncoplastic techniques are increasingly described for patients undergoing breast cancer treatment.

**Objective:** To assess the impact of oncoplastic surgery on quality of life and self-esteem of breast cancer patients who are having breast-conserving surgery.

**Design:** Prospective nonrandomized trial.

**Participants/Methods:** There were 45 patients with primary breast cancer who underwent breast-conserving surgery with immediate partial breast reconstruction. They were questioned regarding quality-of-life and self-esteem outcomes preoperatively and at 6 and 12 months postoperatively. As a control, 42 breast cancer patients, treated with conservative surgery not followed by partial breast reconstruction at least 1 year previously, were also assessed. Validated questionnaires including the Brazilian version of the Short Form-36 and the Rosenberg-EPM Self-Esteem Scale were utilized. Data were analyzed with the Mann-Whitney and Friedman tests.

**Results:** At the follow-up assessments, 95.5% participated at the 6-month follow-up and 88.9% at the 12-month follow-up. Groups were matched for age, body mass index, and demographic and oncologic features. At 1 year postoperatively, the breast reconstruction group compared to the control group had improved health status with regard to physical functioning ($P < 0.000$), health perception ($P < 0.002$), vitality ($P < 0.007$), social functioning ($P < 0.02$), role emotional ($P < 0.02$), mental health ($P < 0.000$), and self-esteem ($P < 0.02$). Compared to preoperative status, women who had been reconstructed scored significantly higher for: physical functioning ($P < 0.01$), role physical ($P < 0.02$), health perception ($P < 0.02$), vitality ($P < 0.01$), social functioning ($P < 0.02$), role emotional ($P < 0.05$), and mental health ($P < 0.02$). Self-esteem was also significantly better at 12 months ($P < 0.02$).

**Conclusions:** Using validated questionnaires, it was shown that oncoplastic partial breast reconstructive surgery had a positive impact on quality of life and self-esteem of women undergoing breast-conserving treatment.

**Reviewer’s Comments:** Improved cosmetic results have been achieved by employing reconstructive plastic surgery techniques immediately after appropriate oncologic resection. This approach is known as an oncoplastic one. This paper demonstrates a collaboration between the extirpative breast surgeons performing an oncologically complete operation and the reconstructive plastic surgeons utilizing their knowledge of local flaps and breast reduction techniques. The success of this team effort was shown, by improved health status and self esteem among the patients, using validated questionnaires. A paper such as this shows that it is key not only to collaborate and develop new and improved surgical techniques, but also to evaluate them in a standard fashion so we can be assured that the desired goal of patient safety and satisfaction is achieved. (Reviewer-Robert T. Grant, MD).

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Keywords: Breast Reconstruction, Partial Mastectomy Defects, Oncoplastic Reduction, Validated Questionnaires, Self Esteem

Print Tag: Refer to original journal article
A ruptured globe is a contraindication to transconjunctival orbital floor repair.

**Background:** The transantral approach to orbital floor fracture repair has long been considered useful only in the immediate management of pure blowout fractures.

**Objective:** To report use of endoscopic assisted repair to assess usefulness of this technique in other orbital floor fracture patterns.

**Design:** Retrospective review.

**Participants/Methods:** 32 patients who presented with orbital floor fractures over a 10-year period were studied. Many of the patients had other associated facial fractures, and 15 patients presented with diplopia. Twenty-eight patients underwent transantral orbital floor fracture repair. Mean follow-up time was 27 months.

**Results:** All patients in this series experienced adequate fracture reduction. Eleven of 15 patients with diplopia on initial presentation had resolution of these symptoms.

**Conclusions:** This approach is safe and reliable for many patients with a variety of orbital floor fractures including pure blowout fractures. Long-term follow-up suggests that a broader application of the technique yields good results.

**Reviewer's Comments:** While this paper presents a unique approach to orbital floor trauma, it suggests that this approach has lesser associated morbidity than traditional techniques. In fact, the endoscopic approach has a steep learning curve and allows for decreased exposure, which can make appropriate fixation difficult. Furthermore, for orbital floor fractures with a medial extension, medial transconjunctival incision is necessary for exposure and management of that part of the fracture. While the authors claim that one technique does not obviate the other, one would argue that it would be preferable to manage the fracture through one incision. Preoperative planning in these cases is particularly difficult. The medial extensions of such fractures are often difficult to visualize on CT and may be difficult to assess on operative exploration as well. This may account for some of the cases of residual enophthalmos after transantral reduction. Overall, this is a novel and useful approach, especially for patients who have preexisting maxillary wall fractures requiring fixation. However, existing periorbital approaches remain straightforward, allow for good visualization, and many surgeons are well versed in them. A transantral approach would likely be most useful in particular cases such as those where globe manipulation is inadvisable. (Reviewer-Robert T. Grant, MD).

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Keywords: Orbital Floor Fracture, Endoscopic Repair, Minimal Invasive Repair, Maxillary Antrum

Print Tag: Refer to original journal article
Cost-Effective Wrist Band Helps Lower PONV Rates

The Effect of Electroacustimulation on Postoperative Nausea, Vomiting, and Pain in Outpatient Plastic Surgery Patients: A Prospective, Randomized, Blinded Clinical Trial.

Larson JD, Gutowski KA, et al:

Plast Reconstr Surg 2010; 125 (March): 989-994

Better control of PONV speeds time to discharge from outpatient surgical procedures.

Background: Postoperative nausea is a challenging problem to manage in the perioperative period, particularly when narcotic medications are needed for analgesia pain. During elective ambulatory surgical procedures, increased rates of postoperative nausea and vomiting (PONV) can lead to prolonged stays, increased complications, and otherwise unnecessary hospital admissions.

Objective: To evaluate the impact of an electroacustimulation (acupuncture-like) device as an adjunct to standard pharmacologic management on rates of PONV.

Design: Prospective randomized blinded trial.

Methods: 122 patients underwent outpatient surgical procedures under general anesthesia. All had an FDA-approved electroacustimulation device secured via wrist band. All patients received standard pharmacologic protocols for perioperative nausea control. Half the patients had the device activated during their procedure. The on/off switch for the device was covered and the device was only activated once the patient was anesthetized, blinding the patient to whether or not they received the experimental treatment.

Results: Patients who received electroacustimulation had lower PONV scores at 30 and 60 minutes postop. Patients who had undergone abdominal procedures were discharged 20 minutes sooner on average. Narcotic pain requirements in breast surgery patients were lower in the treated group, but pain scores were not statistically different.

Conclusions: Use of this device is a cost-effective adjunct to control PONV.

Reviewer's Comments: I have used a similar but more basic, non-electric activated wrist band device whenever I am on board a ship to minimize my predilection for developing motion sickness. The electroacustimulation device used by the authors takes this application of Chinese medicine to a new level. Standard pharmacologic management of PONV can require multiple agents, and exposes the patient to multiple potential side effects. From a cost perspective, with the exception of intravenous corticosteroids, the drugs administered can be pricey. That's why I agree with these authors that use of this device, which can be used over and over on multiple patients, seems like a terrific idea. I'd like to ask the authors 2 questions: does it work even better if applied for longer periods of time and not just intra-op? And how effective is it for seasickness? (Reviewer-Robert T. Grant, MD).

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Keywords: Postoperative Nausea and Vomiting, Electroacustimulation, Acupuncture

Print Tag: Refer to original journal article
The blood clot that forms on a skin graft helps to provide nutrients for wound healing and epithelialization.

**Background:** Wound healing is largely dependent on environment.

**Objective:** The hypothesis of this study was that, given the appropriate environment, skin grafts placed upside down would become amenable to proper wound healing and epithelialization.

**Methods:** 72 full-thickness wounds were made in a pig animal model. Autologous skin grafts were placed, either in sheet form or meshed, on these wounds. Skin grafts were allowed to heal in a dry or wet environment, and they were assessed at 4, 6, 9, and 12 days post-wounding. Wound contraction was also assessed at those time periods.

**Results:** Sheet grafts survived only when placed in a wet environment. Meshed grafts in the dry environment suffered decreased epithelialization and higher rates of wound contraction. Meshed grafts maintained in a wet environment survived even when placed upside down, and they experienced an accelerated epithelialization that allowed them to heal with a comparable course to the grafts placed in the appropriate orientation.

**Conclusions:** The environment of the healing wound is paramount to appropriate healing.

**Reviewer’s Comments:** This study represents an excellent demonstration of the wound healing environment. Placing the skin grafts upside down emphasizes the fact that appropriate wound healing involves more than the simple interface between graft and recipient bed. The analysis of the skin thickness in samples placed upside down demonstrates well the ability of the moist environment to stimulate cell transformation and migration. It would be interesting to know the authors’ impression of the applicability of these data to routine wound care. While it is understood that proper wound healing involves avoidance of wound desiccation, what are the ideal media for wound care, and how moist should the wound be? It would have been interesting to evaluate the results with 2 different methods of moisture maintenance. (Reviewer-Robert T. Grant, MD).

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Is Acceptable Facial Appearance Truly Necessary for Optimal Function in Society?

Appearance is a Function of the Face.

Borah GL, Rankin MK:

Plast Reconstr Surg 2010; 125 (March): 873-878

Improvement of one’s appearance by esthetic correction of congenital or traumatic facial deformities does improve function.

Background: Reconstructive surgery is defined as procedures on congenital or acquired deformities to achieve improved form or function. Cosmetic surgery is operating on a normal body part to change its appearance. Third party payers confuse this distinction by classifying plastic surgery procedures as functional or not functional, refusing to pay for procedures that they decide do not improve the patient's function by describing them as being not medically necessary.

Objective: To demonstrate that improvements in facial appearance do in fact improve patients’ function and when not cosmetic, should be considered medically necessary.

Design: Survey of a statistically representative cross-section of the U.S. population.

Methods: The Facial Function Assessment scale, the Rosenberg Self-Esteem Scale, the Gamble Risk Questionnaire, and the Demographic Data Form were pilot tested on college students and then distributed. In total, 210 respondents completed the surveys with even gender distribution and demographics consistent with the goal to be representative.

Results: The face ranked highest on the subjects' rank order list of physical body parts to restore if injured or deformed. Test subjects distinguished between procedures that were designed to treat facial changes of aging as opposed to those addressing post-traumatic scars or acquired or congenital deformities. Conclusion: A normal facial appearance, not just physical attractiveness, is necessary to avoid the dysfunction and adverse consequences associated with facial dysmorphia.

Reviewer’s Comments: Facial composite allotransplantation is now a reality. I think it is important to see metrics defined in well designed studies like this one that allow for a better understanding of the risk/benefit analysis for procedures designed to restore or improve the appearance of the face. I was particularly impressed by the authors' data here that showed the number of patients (50%) who would tolerate what I consider to be a high risk of death (7%) in order to obtain a normal facial appearance if seriously disfigured. Craniofacial surgeons especially have to deal with the bias of insurers not to pay for corrective surgery to restore facial appearance--that's why the ASPS/ASMS both have to continue to lobby for mandated coverage for correction of craniofacial deformities. Social science data from similar studies 20 years ago convinced legislators that breast reconstruction is not cosmetic surgery. Studies like this one should help impress insurers and policy makers that facial reconstructive surgery to restore appearance is more than just elective and beneficial--it truly should be considered medically necessary. (Reviewer-Robert T. Grant, MD).

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Keywords: Facial Appearance, Scars, Trauma, Congenital Anomalies

Print Tag: Refer to original journal article