Pearson’s chi squared test was used to assess factors associated with preoperative opioid use. Multivariate regression analysis was used to examine the association between opioid use and the risk of complications.

RESULTS: Of the 203 patients included in this study, 40 (19.7%) had documented preoperative opioid use. There were no significant associations between preoperative opioid use and age, BMI, race, gender, ASA class, or comorbidities. Preoperative opioid users spent on average two more days in the hospital (coef: 2.11, 95% CI 0.329–3.89; p=0.02) and approximately 75 more minutes in the operating room (coef: 75; 95% CI: 23.9–126; p<0.005). There was a statistically significant association between preoperative opioid use and complications within 30 days after surgery (OR: 2.89; 95% CI: 1.27–6.61, p=0.01) and within 180d after surgery (OR: 3.91; 95% CI: 1.33–11.5, p=0.01).

CONCLUSION: Preoperative opioid use has been linked to worse postoperative outcomes in orthopedic and general surgery. This study suggests that preoperative opioid use is associated with increased odds of postoperative complications following panniculectomy within both 30 days and 180 days as well as longer lengths of stay and operative times. With these findings in mind, plastic surgeons should be aware of the potential consequences of preoperative opioid use and approach the issue with increased caution.

QS25

The Impact of Ptosis, Breast Size, and Surgical History on Complications in Autologous Breast Reconstruction

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INTRODUCTION: Previous studies have attempted to elucidate risk factors in autologous breast reconstruction associated with wound complications and outcome with varying results. BMI is a risk factor that has been associated with a variety of reconstructive complications. Preoperative breast size has also been independently associated with infection and skin flap necrosis in expander-implant based reconstruction. However, there are few examinations of pre-operative breast dimensions and other comorbidities as a prognostic indicator of complications throughout various stages in the autologous breast reconstruction process.

METHODS: A retrospective cohort analysis was performed on free-flap autologous breast reconstructions performed by two surgeons at a single institution from 2012–2018 (NTH, SST). Surgeries were divided into two groups based on post-operative complications: 1. No Complications and/or No Serious Complications (outpatient treatment), n=1239.2. Serious Complications requiring operative treatment or hospital admission, n=170. Complications at any point in the reconstruction process were considered: both after the tissue expander stage (if applicable), and also after the free flap reconstruction. Continuous variables were analyzed using t-tests. Binary variables were analyzed using Chi-Square (χ²) tests or Fisher’s exact test for subgroups with n<5. Logistic multivariate regression analysis was performed to control for BMI. Data was collected using a centralized REDCap database. Statistical analysis was performed using R.

RESULTS: Multivariate analysis after controlling for BMI demonstrated no statistically significant difference between groups for breast cup size (p>0.08), ptosis (p=0.066) and pre-operative breast dimensions (p>0.117). Patients with history of hypertension and previous surgical history of breast implant (p=0.013), tissue expander (p<0.01), breast reconstruction (p<0.01), oncologic breast surgery (p=0.026), and lumpectomy (p<0.01), were more likely to have at least one serious complication during the reconstruction process.

CONCLUSIONS: This study provides clinical evidence that suggests increasing breast size is not correlated with increasing rates of serious complications, regardless of BMI, in free-flap autologous breast reconstruction after breast cancer. Rather, the results indicate that patients who have attempted previous breast reconstruction due to cancer are more likely to have serious complications. Whether this is due to an underlying biological susceptibility or the previous attempt at reconstruction is the root cause is worthy of further exploration.

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QS26

NSQIP for Monitoring Outcomes after Implant-Based Breast Reconstruction: is it Enough?

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PURPOSE: Implant based breast reconstruction (IBR) accounts for 70% of post-mastectomy breast reconstructions in the United States. Improving the quality of surgical care in IBR patients through accurate measurements of outcomes is necessary. The purpose of this study is to compare data from the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) with our institution’s electronic health records database.

METHODS: Data was collected and recorded for all patients undergoing IBR at our institution from 2015 to 2017. The data was completely identified and compared with our institutional NSQIP database for demographics and complications.

RESULTS: The electronic health records data search identified 768 IBR patients in three years and NSQIP reported on 229 (30%) patients. Demographics were reported similarly among the 2 databases. Rates of implant infections (6.6% Vs. 1.8%; p=0.003) and wound dehiscence (4.3% Vs. 0.4%; p=0.003) were not reported similarly between our database and NSQIP. However, the rates of hematoma (2.3% Vs. 1.8%) and skin flap necrosis (2.9% Vs. 1.8%) were comparable between the two databases. In our database, 35% of all complications presented after 30 days of surgery.

CONCLUSIONS: Databases built on partial sampling, such as the NSQIP, may be useful for demographic analyses, but fall short of providing data for complications following IBR, such as infections and wound dehiscence. These results highlight the utility and importance of complete databases. National comparisons of clinical outcomes for implant-based breast reconstruction should be interpreted with caution when using partial databases.

QS27

Alloplastic Facial Implants: A Systematic Review Analyzing Outcomes and Uses in Aesthetic and Reconstructive Facial Surgery

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PURPOSE: Alloplastic materials in facial surgery have been used successfully for various applications in the reconstructive restoration or aesthetic augmentation of the facial skeleton. Among its most popular uses are repairs of the orbital floor, malar augmentation, and auricular reconstruction in the setting of traumatic injury or congenital microtia. The objective of this study was to conduct a comprehensive systematic review of alloplastic implant materials utilized in the face stratified by anatomical distribution, indication, specific material used, and respective outcomes.

METHODS: A comprehensive systematic review of published literature on alloplastic facial implant data was conducted utilizing Medline/PubMed database without timeframe limitations. Articles were stratified by (1) anatomic localization in the face, including the zygoma, nose, mandible, orbit, frontal bone, maxilla, and glabella, as well as (2) indication for use (aesthetic vs reconstructive). All demographics, post-operative complications data, and reported cosmetic outcomes were recorded. Results were considered statistically significant at p < 0.05.

RESULTS: A total of 23 case series’ and 32 isolated case reports were identified to meet the inclusion criteria. From the case series’ data, 2100 patients were included. Overall, polytetrafluorourethylene implants were associated with a