nonsurgical procedures. Thirty percent of respondents said that it was illegal for any licensed physician to perform a cosmetic/aesthetic surgical procedure, while 24% believe that it is legal and 47% were unsure. When asked about nonsurgical procedures, 15% believe that it is illegal for any licensed physician to perform the procedure, while 37% believe that it is legal and 48% were unsure. The most important factor when choosing a physician to perform surgery to improve appearance was experience, while the least important factor was the type of surgeon/aesthetic provider. Multinomial logistic regression showed that if a person has had a cosmetic/aesthetic procedure, they are more likely to say that plastic surgeons (OR 2.547, CI 95% 9.988–6.459) are the most qualified to perform surgery to improve appearance than if they had not had a procedure. Before visiting a doctor, 46% of respondents reported they always check board-certification, 27% sometimes check, 22% do not check, and 5% did not know about board-certification. The majority of respondents said that it was extremely important (55%) that their physician is board-certified.

CONCLUSIONS: This study demonstrates that while respondents believe that plastic surgeons are the most qualified to perform surgical procedures, they are comfortable with a variety of aesthetic providers performing both surgical and nonsurgical procedures. This analysis will help national plastic surgery societies focus their efforts to educate the public by understanding knowledge gaps and sources of misinformation.

Developing the Aesthetic Postoperative Complication Score for Detecting Major Morbidity in Facial Aesthetic Surgery

Presenter: Jose Cataneo, MD

Co-Authors: Victor Martinez-Zavala, MD, Rodrigo Arias-Serrato, MD, Parit Patel, MD, MBA

Affiliation: University of Illinois at Chicago/Metropolitan Group Hospitals

INTRODUCTION: Facial aesthetic surgery encompasses a wide variety of procedures with a complication rate that is difficult to estimate. To explore this further, we sought to estimate major complication rates in patients undergoing facial aesthetic procedures and to develop a risk assessment tool to stratify risk.

METHODS: We utilized the Tracking Operation and Outcomes for Plastic Surgeons database from 2003 to 2018. The database was evaluated to include major facial aesthetic procedures selected based on CPT codes. All infra-cervical procedures were excluded. Procedures included were blepharoplasty (upper and lower), rhytidectomy (forehead, neck with platysma tightening, glabellar, SMAS flap, cheek, chin, and neck), repair or brow ptosis, repair of blepharoptosis, canthopexy (lateral and medial), genioplasty, augmentation of mandibular body, primary rhinoplasty (minor and major), revision rhinoplasty (minor and major), subcutaneous injection/fat transfer, cervicoplasty, and otoplasty. Demographics, comorbidities, and procedures were analyzed with univariate analysis for initial selection. Clinically relevant cutoff points were used to dichotomize significant continuous variables for the model. A backward stepwise multivariate regression model was developed to determine the risk factors for prediction. Goodness-of-fit was assessed with Hosmer-Lemeshow test. Regression coefficients were multiplied by two and rounded up to the nearest integer, and then summed to create the total score. Area under receiver operating characteristic curves were used to measure performance and choose optimal predictive models. Lastly, sensitivity analysis was performed with a complete case analysis to evaluate robustness of the model.

RESULTS: A total of 38,569 patients were identified to have had a facial aesthetic procedure. The major complication rate for this adult population undergoing at least one facial aesthetic procedure was 1.44% (460). From the available demographics and perioperative variables, those statistically significant in univariate analysis included current/former smoker, diabetes mellitus, body mass index, ASA classification, canthoplasty, blepharoptosis repair, rhytidectomy in forehead, rhytidectomy with platysma thickening, rhytidectomy with SMAS flap, rhytidectomy with check/chin/neck, cervicoplasty, subcutaneous injection of filler/fat graft, primary rhinoplasty, lower blepharoplasty, and over three procedures were performed at the same time. In the final stepwise backward regression model undergoing rhytidectomy with platysmal thickening, rhytidectomy of cheek/chin/neck, cervicoplasty, over three surgeries at the same time, BMI ≥ 25, and ASA class ≥ 2 were the variables fit for calculating the risk prediction score [n = 13,349; AUC: 0.70, SE: 0.02, (0.66–0.74)]. The sum of the calculated integers gives a total score of 7 with cervicoplasty counting for two points and the rest of the covariates each given one point. Sensitivity analysis from each level of our score (0–7) showed the cutoff point of ≥2 to best balance sensitivity and specificity, with 58% and
70%, respectively. At this cutoff point, 70% of cases were correctly classified as a major complication (n = 12,764).

CONCLUSIONS: Despite low morbidity rates, we were able to develop an acceptable risk prediction score with a cutoff value of ≥2 correctly classifying approximately 70% of major morbidity in adult patients undergoing face and neck aesthetic surgery.

Outcomes for Cosmetic and Reconstructive Surgeries of the Periorbital Complex from the “Tracking Operations and Outcomes for Plastic Surgeons” Database

Presenter: Jose Cataneo, MD
Co-Authors: Victor Martinez-Zavala, MD, Sydney Mathis, BS, Diana Del Valle, MD, Parit Patel, MD, MBA
Affiliation: University of Illinois at Chicago/Metropolitan Group Hospitals, Chicago, IL

GOALS/PURPOSE: Eyelid surgery for both aesthetic and reconstructive purposes are common plastic surgery procedures. However, there is a paucity of data from multi-institutional studies with large sample sizes. The purpose of this study was to utilize a national database and perform a comprehensive analysis of surgical outcomes for blepharoplasty.

METHODS/MATERIALS: This is a retrospective cohort review from 2003 to 2018 using the Tracking Operations and Outcomes for Plastic Surgeons database. The dataset was evaluated using Current Procedural Terminology codes for blepharoplasties and its related procedures (15820, 15821, 15822, 15823). These codes correspond to lower eyelid blepharoplasty, lower with extensive herniated fat pad, upper eyelid blepharoplasty, and upper with excessive skin weight down. The core groups analyzed are those with upper, lower, or combined blepharoplasties. Categorical variables are described as frequencies and compared with Fisher exact or Pearson chi-squared test. Continuous variables, based on normality, are described as means (SD) or medians (IQR) and compared with Student T or Wilcoxon Rank-sum test, respectively. A stepwise backward multivariate logistic regression analysis was performed to assess the effect size of risk factors for adverse events with a P value set at 0.05 for significance.

RESULTS/COMPLICATIONS: A total of 20,275 eyelid procedures were included. Mean age was 54.7 years (SD 12.26), female rate was 86.2% (17,466), and mean BMI was 24.77 (SD 5.65). In demographics and comorbidities, 68.4% were Whites, followed by Asians (8.7%), diabetes rate was 2.9%, and 5.9% were smokers. We analyzed 15,720 (77.5%) upper and 13,359 (65.9%) lower eyelids; of those, 8804 (43.4%) were combined. The complication rate was 2.47% for upper, 3.97% for lower eyelid, and 4.68% for combined. Comparing combined blepharoplasties to single eyelid, there was a statistically significant higher rate of hematoma (P < 0.001) eyelid malposition/asymmetry (P = 0.004) and chemosis (P < 0.001) in the combined group. For lower eyelid blepharoplasty, ectropion was more common compared with combined (P < 0.001). On the multivariate regression analysis, combined blepharoplasty (OR 1.49 95%CI 1.08–2.08; P = 0.01), performing over three procedures at the same case (OR 1.80 95%CI 1.34–2.41; P < 0.001), and Hispanic ethnicity (OR 3.1 95%CI 1.17–8.21; P = 0.02) were associated with a higher likelihood to have complications. However, being a non-tobacco smoker (OR 0.56 95%CI 0.36–0.86; P = 0.009) lowers that probability by 44%.

CONCLUSIONS: The results from this study provide insight into the national complication rate for blepharoplasty to be up to 4%, with hematoma and return to the OR as the most common. Risk factors identified for developing complications are performing a combined upper and lower blepharoplasty, having over three procedures at the same time and being of Hispanic ethnicity, while no history of smoking was associated with a decreased probability for morbidity.

Three-dimensional Topographical Analysis of Edema Management following Rhinoplasty: A Randomized Prospective Study Comparing 3D-printed Custom Nasal Splints and Taping

Presenter: Anmol Patel, BA, BS
Co-Authors: Alexandra Gordon, MS, Jillian Schreiber, MD, Donald Salisbury, BA, BS, John Layke, DO, Oren Tepper, MD
Affiliation: Montefiore Medical Center

INTRODUCTION: Postoperative edema is a common sequela following rhinoplasty, which delays visualization of the final result and causes distress to both the patient and surgeon. Despite various modalities to control edema