ATTRACTIVENESS, AND CHARACTER TRAITS IN 597 INDIVIDUALS

Dillan F. Villavisanis, BA[1], Clifford I. Workman, PhD[2], Daniel Y. Cho, MD, PhD[1], Zachary D. Zapatero, BS[1], Connor S. Wagner, BS[2], Liana Cheung, MBBS[1], Jessica D. Blum, MSc[1], Scott P. Bartlett, MD[1], Jordan W. Swanson, MD MSc[1], Anjan Chatterjee, MD[2], Jesse A. Taylor, MD[1]

[1]Children's Hospital of Philadelphia, Philadelphia, PA, USA, [2]Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA, USA.

PURPOSE: Facial proportionality has known associations with perceptions of sociability, intelligence, and health; however, many previous studies used small sample sizes or artificial facial renderings. Using a large dataset, this study aimed to 1) determine the association of proportionality with attractiveness and character traits 2) determine differences in attractiveness and character ratings between "anomalous" and "typical" faces using a large dataset.

METHODS: 597 individuals were included from Chicago Face Database, a domain of facial measurements and metrics by 1,087 raters. The equation "Proportionality" quantified horizontal proportionality: "0" indicated perfect proportionality and more negative scores indicated disproportionality. Individuals were categorized as "anomalous" (ie: jaw asymmetry, scars) or "typical" by two reviewers.

RESULTS: Spearman's correlations revealed proportionality was associated with attractiveness ($\rho=0.292$, $p<0.001$) and trustworthiness ($\rho=0.193$, $p<0.001$), and disproportionality with anger ($\rho=0.132$, $p=0.001$), dominance ($\rho=0.259$, $p<0.001$), and threateningness ($\rho=0.234$, $p<0.001$). Mann-Whitney U tests revealed the "typical" cohort had higher levels/ratings of proportionality (-13.89 vs. -15.26, $p=0.008$), attractiveness (3.43 vs. 2.95, $p<0.001$), and trustworthiness (3.49 vs. 3.34, $p<0.001$). Multivariate logistic regression models demonstrated interactions between proportionality and attractiveness predicted presence of facial anomalies (OR=1.056, 95% CI=0.008-0.102; $\beta=0.055$, SE=0.024, z=2.285, $p=0.022$).

CONCLUSION: This study demonstrates associations of facial proportionality with ratings of attractiveness and character traits. Additionally, proportionality and attractiveness both play a role in predicting the presence of facial anomalies.

P11. UPPER BLEPHAROPLASTY WITH OR WITHOUT PTOSIS CORRECTION: AN ANALYSIS OF OUTCOMES IN 533 CONSECUTIVE PROCEDURES AT AN ACADEMIC HOSPITAL

Liset Falcon Rodriguez, BA[1], Doga Kuruoglu, MD[2], Lilly H. Wagner, MD[3], Elizabeth A. Bradley, MD[3], Samir Mardini, MD[2], Uldis Bite, MD[2], Basel A. Sharaf, MD[2]

[1]Mayo Clinic Alix School of Medicine, Jacksonville, FL, USA, [2]Mayo Clinic Division of Plastic Surgery, Rochester, MN, USA, [3]Mayo Clinic Department of Ophthalmology, Rochester, MN, USA.

PURPOSE: Eyelid ptosis may present along with upper lid dermatochalasis and brow ptosis. When indicated, ptosis correction (PC) is advocated during upper blepharoplasty (UB). In this study, we aimed to report outcomes following UB with PC.

METHODS: A retrospective review of consecutive patients that underwent UB from November 2018 to March 2020 was performed. Patient demographics, clinical characteristics as well as revisions were recorded. Cox-regression was performed to assess predictors of revision surgery.

RESULTS: Overall, 278 patients with 533 primary UB were included. The mean age was 67.3 years and mean follow-up was 8.3 months. In 169 (31.7%) cases, a brow lift was performed. UB with PC was performed in 109 (20.5%), of which 60 (55%) involved Müller's muscle conjunctival resection and 49 (45%) were levator repairs. There were no wound complications. New dry eye symptoms lasting ≥3 months occurred in 4 (0.8%) cases all of which resolved. A revision was performed in 3.8% after UB alone (residual skin [n=11], hypertrophic scar [n=4], Herring's law related ptosis [n=1]); versus 9.2% in the UB with PC group (overcorrection [n=4], residual skin [n=4], asymmetry [n=2]). The multivariable analysis demonstrated increased rate of revision when UB was combined with PC (adjusted HR: 4, 95% CI [1.8-8.8], p= 0.008). There was no difference

in revision rates between the different techniques of ptosis correction.

CONCLUSION: Upper blepharoplasty with PC is safe regardless of which PC technique is used. The revision rate of combined UB and PC was 9.2%, which is comparable to the literature.

P12. MODERNIZING GEPPETTO'S WORKSHOP: PREDICTING AESTHETIC OUTCOMES OF 3D-PRINTED, PATIENT-SPECIFIC DORSAL NASAL IMPLANTS UTILIZING A NOVEL IMAGING PROTOCOL

Nicholas A. Vernice, AB, Carly A. Askinas, BS, Sabrina Shih, BA, Xue Dong, MD, PhD, Ryan J. Bender, BS, James Shin, MD, Jason A. Spector, MD

Weill Cornell Medicine, New York, NY, USA.

PURPOSE: To develop a low-cost, rapid protocol for the design and production of custom-fabricated dorsal nasal implants.

METHODS: For protocol validation, we utilized facial CT data to provide "ground truth" patient anatomy. Using these data, 3D models of the subject's skull and soft tissue were 3D-printed with polylactic acid (PLA) and cast in silicone, respectively. This "face phantom" was imaged to generate a 3D photograph utilizing commercially available photogrammetry software. Desired augmentation was determined via virtual deformation of this model. A corresponding, custom-designed dorsal nasal implant was 3D-printed in PLA, implanted on the phantom, and reimaged as above. To demonstrate fidelity, the photogrammetrically-derived model with and without augmentation was co-registered and compared to CT-derived "ground truth".

RESULTS: Photogrammetric comparison between the 3D photograph and CT-derived "ground truth" revealed an average Hausdorff distance of 0.198 mm (95% 0.640 mm; Dice coefficient=0.989). Dorsal nasal augmentation revealed an average Hausdorff distance of 0.381 mm (95% 1.56 mm; Dice coefficient=0.978) compared to "ground truth." Comparison between expected and actual augmentation revealed an average Hausdorff distance of 0.276 mm (95% 1.24 mm; Dice coefficient=0.985). Heatmap analysis demonstrated high congruence in all relevant anatomical areas,

with variation exclusively noted along the nasal dorsum as expected.

CONCLUSION: Our imaging protocol produces a highly accurate means of capturing critical facial anatomy necessary for design of custom-fabricated dorsal nasal implants.

P13. WITHDRAWN.

P14. WITHDRAWN.

P15. WITHDRAWN.

P16. BREAST IMPLANTS AND BREAST CANCER IMMUNOSURVEILLANCE: AN UPDATED AND LONGITUDINAL ANALYSIS OF ANTIBODY RESPONSES TO BREAST CANCER ANTIGEN POST IMPLANT PLACEMENT

Ramsey Timmerman, BS, Sophia Allison, BASc, Megan Fracol, MD, David Dolivo, PhD, Seok Hong, PhD, Robert Galiano, MD, FACS, John Y.S. Kim, MD, FACS

Northwestern University, Chicago, IL, USA.

PURPOSE: We previously demonstrated women with breast implants have higher antibody responses to select breast cancer proteins compared to women with no implant exposure. Here, we present antibody response data on a larger cohort of women and with a longer follow-up period.

METHODS: Sera was collected from 34 patients prior to and one-month after breast augmentation surgery, as well as six months after surgery in 10 patients. Antibody responses to breast cancer proteins were tested via ELISA assay. Pre- and post-implant responses were compared with paired t-test using Graphpad Prism v9.1.2.

RESULTS: Average age was 31.6 years (SD 8.2 years) and average BMI 24.1 (SD 5.1). Twenty-nine patients (85.3%) received silicone and all received smooth implants. At one month post-implant placement, anti-MUC1 antibody levels were significantly increased (n=34, mean difference 0.065, p= 0.0002). At six-months post-implant placement, antibody response was significantly increased for MUC-1 (n=9, mean difference 0.051, p=0.015), ER (n=9, mean difference 0.124, p=0.0015), BRCA2 (n=10, mean difference 0.076,