from 66.5% to 40.8% post-operatively (p < 0.001). However, depression and anxiety severity, on scale of 1-10, was not statistically different post-operatively. There was a significant reduction in the number of patients reporting chronic pain post-operatively, with a reduction from 27.3% to 9.4% (p = 0.009). Following, validation we achieved a Cronbach’s alpha of 0.81 and modified the survey accordingly to remove invalid items.

**CONCLUSION:** While awareness and interest in transgender surgery continue to grow, there are many unanswered questions regarding the impact on the individual of pursuing surgery. This study is the first of its kind to pre- and post-operatively survey genetic females who went on to pursue FTMM. We have demonstrated a diverse patient population in regards to age, sexual orientation and barriers to care. We hope that reports such as this will bring light to the growing field of transgender survey and the barriers that patients face when seeking gender confirmation surgery. We are in the process of continuing to enroll patients in this prospective study using the validated questionnaire while conducting a longitudinal analysis of patients already included to allow for more rigorous and long-term data analysis.

Drain-Free Technique for Female to Male Gender Confirmation Chest Surgery Decreases Morbidity- Outcomes from 214 Consecutive Mastectomies

**Presenter:** Sidhbh Gallagher, MD

**Co-Authors:** Farrah Rahmani, MD; Stephen P. Duquette, MD

**Affiliation:** Indiana University, Indianapolis, IN

**PURPOSE:** The gold standard for treatment of gender dysphoria is a multimodal approach using medical and surgical techniques. We present 107 consecutive patients who underwent 214 mastectomies with free nipple grafts performed by a single surgeon with the use of progressive tension sutures to obviate the need for closed suction drainage. The aim of this paper is to compare morbidity in this group to previously published outcomes where drains were used.

**METHODS:** A retrospective chart review was undertaken of all patients presenting to a single surgeon for gender confirming chest surgery. Patients presenting for gender confirmation surgery who did qualify for minimal scar techniques were excluded from this study. After approval was obtained from the Indiana University Institutional Review Board, a retrospective chart review was undertaken as well as a literature review, compiling data from previously published studies of mastectomy with free nipple graft for the transgender patient. Outcomes of this drain-free group were compared to historical data, where drains were known to have been employed.

Chi-square and Fisher’s exact test were used for categorical data and statistical significance was set to the level of p < 0.05.

**RESULTS:** 119 patients presented for gender confirming chest surgery however 12 of these were excluded as they opted for minimal scar techniques.

107 patients underwent 214 mastectomies. The mean age of patients was 29 (17–66). 50(47%) were obese. 48 (45%) had 1 or more chronic medical co-morbidities with 15 (14%) diabetic patients. The mean body mass index was 31 (18–57). 31 (29%) of patients had a history of smoking. Average weight resected was 810g on right 812g on left range (98–4650). Mean operative time was 141 minutes (77–266). 86 (80%) of patients were discharged home the day of surgery and all admissions were planned.

The median pain score on the visual analogue pain scale on discharge from the recovery room was 4/10. Hematoma occurred in 1 (0.5%) mastectomy requiring acute return to the operating room. Infections occurred in 4 mastectomies (4%) with wound dehiscence in 3 mastectomies (3%). 2 (2%) mastectomies had partial nipple necrosis. 1 patient developed a symptomatic pneumothorax. There were 0 seromas. 5(5%) mastectomies underwent secondary corrections including 4 “dog-ear” revisions and one Nipple revision. Median follow-up was 8 months.

Outcomes from this drain-free technique were compared to previously published reported outcomes of mastectomy with free nipple graft performed for gender confirmation. When compared to previously published series, (n=1334), the drain-free group had statistically significantly lower rates of hematoma (1/214 vs. 39/1334, p = 0.034) and acute reoperation (1/214 vs. 42/1334, p= 0.023). There was a shorter length of hospital stay in the drain-free group with a statistically significantly lower revision rate (6/214 vs.116/1334, p=0.0015).
CONCLUSION: FTM gender confirmation chest surgery can be safely offered using a drain-free technique. Compared to historical data the use of progressive tension sutures decrease the incidence of hematoma and the need for acute re-operation. They may also facilitate a shorter hospital stay and a decreased need for revision surgeries.

A Comparison of Relative Parameters in Male and Female Nipple-Areola Complexes: An Observational Study Using a Novel Online Search Technique and Implications for Transgender Top Surgery

Presenter: Lei Alexander Qin, BS
Co-Author: Jess Ting, MD

Affiliation: Donald and Barbara Zucker School of Medicine at Hofstra/Northwell, Lake Success, NY

BACKGROUND: Chest masculinization and breast augmentation, often collectively referred to as “top surgery” in the transgender community, are frequently performed procedures for female-to-male (FTM) and male-to-female (MTF) individuals, respectively. Numerous studies have investigated the optimal placement of the nipple-areola complex (NAC) in chest masculinization and male gynecomastia surgeries through the selection of healthy male-identifying volunteers, but few have recruited female-identifying volunteers. The aim of this study was to use images collected from various online databases as a novel method to identify surgically relevant ratios for transgender top surgery and differences between the male and female NAC.

METHODS: Two hundred images (50% female, 50% male) were compiled from online database searches. Inclusion criteria for the images were as follows: 1) upright position; 2) subjects’ arms hanging to their sides in a relaxed position. Multiple parameters, including areola width (AW), areola height (AH), nipple width (NW), nipple height (NH), clavicle to inframammary fold (IMF), NAC to IMF, internipple distance (IND), and chest width (CW), were measured using GNU Image Manipulation Program (GIMP). The following ratios between male and female groups were compared using unpaired t-tests (alpha error set to 0.05): 1) AW to AH; 2) NW to NH; 3) NAC to IMF to clavicle to IMF; 4) sternal notch to CW; and 5) IND to CW.

RESULTS: There was a statistically significant difference for male versus female groups in AW to AH (1.284 vs 1.019, p<0.0001), NAC to IMF to clavicle to IMF (0.1306 vs 0.2661, p<0.0001), and IND to CW (0.7529 vs 0.7292, p<0.0073). There was no significant difference for male versus female groups in sternal notch to CW (0.6438 vs 0.6304, p=0.3674), or NW to NH (1.181 vs 1.124, p=0.3850).

CONCLUSION: Our results highlight many important differences between the placement of the male NAC versus the female NAC that must be considered during chest masculinization and breast augmentation surgeries. The results from our study suggest that the male NAC is more oval in shape, more laterally placed, and located more superiorly than the female NAC. These results corroborate previously established data from other research groups and anecdotal observations from various surgeons who perform gender-affirmation procedures. The results from our study provide a unique method for female and male NAC comparison and demonstrate that there are objective differences between the male and female NAC that can be utilized in clinical practice to improve upon current “top surgery” standards of care.

An Economic Analysis of Financial Barriers to Access Comprehensive Gender Confirmation Surgery

Presenter: Sven Gunther, MD, MAS
Co-Author: Anand R. Kumar, MD, FACS

Affiliation: UH Cleveland Medical Center, Case Western Reserve University, Cleveland, OH

With the increase in insurance coverage and social acceptance in the USA there has been an increase in transgender patients seeking gender confirming procedures from plastic surgeons. The purpose of this study is to compare the estimated cost for genital reconstruction with vaginoplasty vs. phalloplasty in the transgender patient. Given the drastic differences in these procedures we primarily