



Invited Discussion on: Masculinizing Chest Reconstruction in Transgender and Nonbinary Individuals: An Analysis of Epidemiology, Surgical Technique and Postoperative Outcomes



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In this study, the authors' objectives are to compare the postoperative outcomes associated with two different categories of masculinizing chest surgery in transgender and nonbinary individuals. They perform an epidemiological review of the American College of Surgeons National Surgical Database (ACS-NSQIP) to evaluate techniques similar to traditional mastectomy with and without free nipple grafts versus techniques resembling more traditional breast reduction procedures. This is a retrospective analysis of data culled from 2010 to 2107 and identified only by procedural CPT codes and ICD-9 and 10 diagnosis codes. Preoperative history and postoperative morbidity (up to 30 days) were examined and subjected to statistical analysis.

A total of 755 surgeries were selected, of which 591 (78.3%) fell into the category of mastectomy and 164 (21.7%) reduction. They found that over the time period studied, the age of the patients decreased and the number of masculinizing surgeries increased, with the rate of mastectomy increasing faster. Comorbidities and operative characteristics of the two groups were found to be similar, and multivariate analysis found no single factor associated with a significant difference in risk of all-cause complications between the two groups. Infection and hematoma were the most common complications and fell within the expected range. It was noted that in the subgroups of

mastectomy with versus without free nipple graft, outcomes were similar but general surgeons performed seven times as many cases without nipple grafting. Finally, it was noted that a higher percentage of white subjects underwent surgery with a corresponding decrease in black and Hispanic subjects. This highlights disparities in access to care. The authors conclude that generally both types of procedures are safe approaches to chest masculinization.

The authors are to be congratulated on a difficult statistical analysis of two types of surgeries. One of the main problems in evaluating outcomes of gender-affirming surgeries is that historically most of these surgeries have been performed by private practitioners and thus outcomes have remained unreported. Recently, there has been a shift in insurance coverage for gender surgery and more surgeons at large hospitals and academic institutions are beginning to participate. Nevertheless, reporting is still very problematic. For instance, I myself performed over 700 gender-confirming "top surgeries" between 2010 and 2017 at an academic hospital that is listed as participating in the ACS-NSQIP database. Obviously, this volume of cases did not make it into the database. The numbers of cases and types of variables collected will differ from hospital to hospital depending on the hospital patient population, size and quality improvement focus. The hospital where I worked was heavily trauma oriented and may have chosen to focus primarily on trauma outcomes versus top surgery outcomes. Each participating hospital has a surgeon champion assigned to oversee program implementation, and there is leeway in what data are evaluated [1].

Another problem with the database is the fact that insurance coverage for "top surgery" evolved considerably over the time period studied. The authors report that breast-reduction-type surgeries were more prevalent in the early years of the study and then outstripped by mastectomy-type

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surgeries. This may have been a result of surgeons getting more comfortable with mastectomy to create a more masculine chest, but it may have also been a result of the fact that insurance in 2010 was more likely to cover a breast reduction procedure in large-chested individuals versus a mastectomy. By 2017, more carriers were covering mastectomy procedures. Breast reduction codes also have a higher RVU value than mastectomy codes, and thus some reported cases may have been coded inappropriately. The authors themselves recognize and point out this dilemma. The fact that the database is a broad reflection of many institutions does make it useful in highlighting access-to-care discrepancies, and the authors sadly point out that transgender black and Hispanic individuals were less likely to receive chest masculinization procedures.

Finally, and most importantly, the ACS-NSQIP data address variables such as infection or unplanned operation for hematoma, but do not address aesthetic outcome or patient satisfaction [1]. The authors also point this out, but I would like to reiterate that these, in fact, are the most important variables. The study demonstrates that both types of surgery are generally safe and have low complication rates, but the operations are requested by patients primarily as aesthetic procedures. A surgeon's goal should be to deliver the best aesthetic outcome achievable. It would be very instructive to compare the satisfaction rates of top surgery patients who underwent reduction types of procedures versus mastectomy as well as to cross-reference the satisfaction with the patient's preoperative goals. It would also be useful to determine whether those patients who had mastectomies by general surgeons were as satisfied as those who had plastic surgeons as their providers. We learned from the study that general surgeons were much less likely to perform free nipple grafts during mastectomy but we have no way of telling whether the patients were happy with the aesthetic outcome. Very recently, a few

prospective studies have been published using validated scoring techniques for aesthetic outcome and satisfaction after chest masculinization and this should be the norm going forward [2–4]. There is much work to be done in regard to assessing outcomes in gender-affirming surgeries, and I congratulate the authors for making a good attempt with variable data.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflicts of interest to disclose.

Human and Animal Rights This article does not contain any studies with human participants or animals performed by any of the authors.

Informed Consent For this type of study, informed consent is not required.

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