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Review Article

Quality of Anesthetic Care and Knowledge in Transgender Population for Elective Reassignment Surgeries: A Narrative Review

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Article Info

Received: June 05, 2024
Accepted: June 15, 2024
Published: June 17, 2024

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Citation: Krishna Prasad T, Ajit kumar kayal, Dinesh R, Soundarya Priyadharsini K, Dhanush anand. R . (2024) "Quality of Anesthetic Care and Knowledge in Transgender Population for Elective Reassignment Surgeries: A Narrative Review." Anesthesia and Pain Management, 1(1); DOI: 10.61148/2836-077X/APM/003

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Gender reassignment surgery is a series of surgical procedures that alter a person's physical appearance and sexual characteristics to resemble those associated with their identified gender. According to my knowledge, there was a lot of literature that has a surgeon's views on these surgeries. Very few current literature narrate the anaesthetist's approach and it is still unclear. The purpose of this review is to narrate the anaesthesiologist's view for better and more effective anesthetic techniques to enhance prognosis and reduce related morbidity[1]. To create a successful preoperative plan, anesthetists must be aware of the psychological effects and elements of hormone therapy. They must also undertake a thorough and instructive preoperative evaluation. The approach to high-quality anesthetic care consists of offering the best anesthetic modes, keeping a close eye out for difficulties, and acting quickly when they arise.

Patients must interact with their primary care physicians. Anesthetic concerns affect transgender women and men equally, but the transgender community also faces several particular challenges. This paper is limited to issues related to transgender men and women's perioperative treatment. In addition to potential social and pharmacological considerations, this narrative review offers an overview of the factors influencing the safe care of transgender patients undergoing routine surgery. It also highlights anatomical changes from prior gender-confirming or feminization surgeries that may impact clinical decision-making.
Keywords: transgender; gender reassignment surgery; psychotherapy; cosmetology

Literature Review

We searched the literature for publications published up until 2023 on the approach to gender reassignment surgery in transgender people. The databases used in this search were PubMed and Ovid MEDLINE. Articles for this review were identified using MeSH terms such as "Transgender", "Transgender Persons", "Gender Dysphoria", "Gender Confirmation Surgery", "Gender Confirmation Procedures", and "Mammaplasty", as well as keywords such as "Transfeminine", "Breast Augmentation", and "Top Surgery". Articles were limited to those published in English.

Using these characteristics, we identified an initial pull of 342 articles. After reviewing the article titles and abstracts, 19 papers and their reference lists were selected for full-text review. Although a complete systematic review was not carried out, the standard systematic review technique was used to ensure the collection of high-quality data for this investigation.

Introduction:

The most common, and sometimes the only, gender-affirming treatment sought by transfeminine patients is surgical breast augmentation, also known as "top surgery."[1] The breast augmentation process for cisgender and transgender patients shares striking characteristics. The World Professional Association for Transgender Health publishes Standards of Care for the Health of Transsexual, Transgender, and Gender Nonconforming People. The SOC's primary goal is to provide therapeutic guidance to medical practitioners so that they can assist transsexual, transgender, and gender nonconforming people in finding safe and practical methods to live comfortably with their gendered identities in the long run. This will improve their overall health, mental well-being, and sense of accomplishment. This support may include primary care, gynecologic and urologic care, reproductive alternatives, voice and communication therapy, mental health services (e.g., assessment, counseling, psychotherapy), and hormonal and surgical therapies. To attain the greatest results, healthcare providers must examine transgender patients' specific criteria, anatomical traits, and contextual obstacles.

This article aims to provide an overview of breast augmentation, scrotoplasty, vaginoplasty, and other plastic operations. We discuss our recommended pre-operative assessment, breast augmentation alternatives, and post-operative care. A strong provider-patient relationship must be developed during the preoperative phase to allow for thorough history-taking and physical tests. Healthcare providers that treat transgender patients must be able to make decisions about implants, binders, incision sites, and surgery plans that balance the patient's preferences with their pre-existing anatomical characteristics. The healthcare provider must meet acute and chronic demands to ensure patient satisfaction and safety following surgery.

Ethical issues and considerations:

Anaesthesiologists would be mistaken to believe that they will be practicing in a setting where their primary job is to deliver safe, high-quality anesthetic care and will not come into contact with transgender patients. Conscientious objection occurs when a medical professional refuses to provide a patient with legal health care services due to personal moral, ethical, or religious beliefs. Conscientious objections are likely to cause controversy in the medical industry. An absolutist perspective supports the premise that medical professionals can designate their area of practice, arguing that the right to reject should be protected regardless of the provider's justification. Nonetheless, there is a chance of religious, ethical, or moral conflict in the absence of some control or supervision. [2]

When it comes to perioperative care, anaesthesiologists must provide medically necessary and ethical therapy; otherwise, it may be unfair or biased. Nevertheless, according to Savulescu, "A physician's values should, of course, be accommodated when doing so does not jeopardize the effectiveness and quality of public medicine.[3] It may not always be possible to distinguish between a provider's moral, religious, or personal objections and overt discrimination.

An objection to working with a group of people would render it unreasonable to refuse to treat a transgender patient solely based on their gender identity. However, an anaesthesiologist's reluctance to administer anesthesia for a specific gender-affirming treatment may not always be discriminatory if they ethically disagree with them. In contrast, an anaesthesiologist's refusal to provide anesthesia for a specific gender-affirming surgery may not be discriminatory if they would morally object to the same procedure being performed on other types of people, but there is a risk that it will be used to conceal discriminatory intentions.

Preoperative guidelines, evaluation, and considerations:

A particular challenge for training program leadership teams is how to deal with a trainee who has a conscientious objection to working with TGD patients. This approach aims to maximize an increase in parenchymal breast tissue, resulting in a better aesthetic outcome following breast augmentation. To meet the requirements and recommendations given in the subject, a multidisciplinary team should be assembled early in the preoperative period. Exogenous hormone use can be managed by endocrinologists or primary care providers who have experience treating transgender people.[4] Psychiatrists who specialize in transgender health are needed for referrals and play an important role in ensuring that all psychiatric concerns are adequately addressed.

Transgender people require special consideration during the preoperative portion of their surgical treatment. From the initial appointment, all healthcare providers must establish an equal and respectful connection with their patients. Unfortunately, transgender patients are more likely than their cisgender peers to experience lethal violence, physical assault, sexual abuse, and suicidality.[5] In the field of medicine, transgender people report shockingly high rates of rude, uneducated, and unsupportive clinicians. By establishing the patient's gender identity and learning about their chosen name and pronouns, physicians can assist the patient in overcoming their background. Providers must document the patient's preferences because they may not fit into a certain gender or identity category. Breast augmentations are occasionally referred to as "top surgery" by patients, so it is vital to recognize and document this desire. Providers must gather a detailed patient history for transfeminine breast augmentation, paying special attention to any efforts the patient has taken to feminize their chest. (Figure 1).

Figure 1: Masculinization of the chest in Transmen

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As previously stated, exogenous hormones should be used for at least a year to prepare for surgical augmentation by promoting native tissue growth. Some associations suggest discontinuing exogenous hormone use about two to four weeks before surgery. It is considered that exogenous estrogen raises the risk of thromboembolic events.[6] However, this method is contentious due to the low prevalence of thromboembolic events and the negative effects of discontinuing hormone usage in the transgender community. In our practice, we no longer discontinue exogenous hormone use, and there have been no recorded changes in the frequency of thromboembolic events

Anatomical changes: considerations:

A smaller catheter may be necessary for urinary catheter placement in transgender patients who have undergone gender-confirming urethral surgery, such as vaginoplasty, phalloplasty, or metoidioplasty with urethral lengthening. (figure 2). In some cases, speaking with a urologist or another clinician who is familiar with transgender anatomy is necessary.[7]

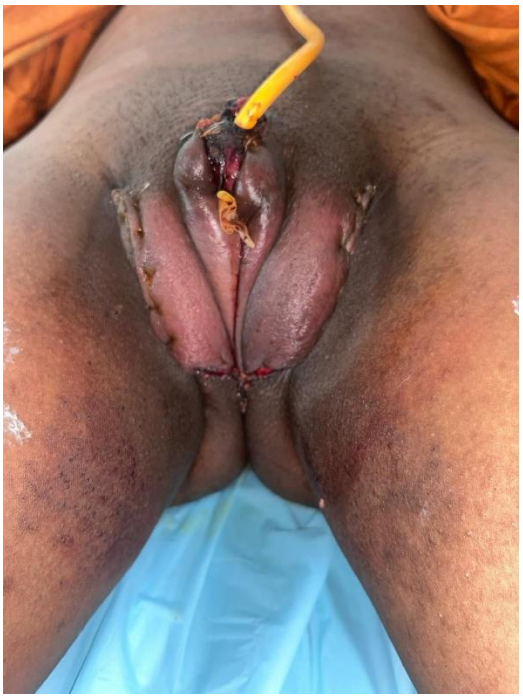

Figure 2: Sex Reassignment surgery with Vaginoplasty in Transwomen

Transgender women may have undergone laryngoplasty or chondroplasty to modify the pitch of their voice. The risks of these treatments include vocal cord injury, tracheal perforation, dysphagia, stenosis, and lumen reduction. These are critical factors that have a direct impact on intraoperative airway care and require extra consideration when intubating. [8]

Breast binders or chest wraps are commonly worn by transgender men who have had gender-confirming surgery. These may be hazardous to respiratory function due to their limited purpose, notwithstanding the lack of study on the matter. Patients must be adequately informed by their doctors as to why these devices should not be utilized during surgery or in the initial postoperative phase. A patient-satisfied reapplication plan and an appropriate length of withdrawal should be agreed upon.

Cardiovascular risks: Data comparing testosterone therapy to a sex hormone-deprived state reveals both increased and decreased cardiovascular risk, raising questions about the safety of this treatment for cisgender men. But parenteral testosterone formulations also seem to be linked to increased erythropoietin synthesis, and because higher blood viscosity is associated with hematocrit>48%, stroke rates are elevated. To avoid cardiovascular problems, preexisting coronary artery disease and testosterone therapy should be carefully taken into account during the induction, maintenance, and intraoperative monitoring of anesthesia.

Postoperative care: For transgender patients, the surgical phase can be particularly difficult as they manage problems with pain, withdrawal, anxiety, and despair. These contribute to the worries already present about unfair medical treatment. Patients should never feel dehumanized when receiving medical care; inadvertent behaviors that cause them to feel uncomfortable should be brought up openly, and any mistakes or offensive incidents should be pointed out in the resolution. In addition to causing psychological distress, awkward or unfavourable interactions with medical professionals can lead to forced or subpar treatment for transgender patients as well as the breakdown of the vital trusting connection between the patient and the provider. As was already mentioned, sensitivity training for employees is crucial to building respect and trust between transgender people and others.

Pain management:

Regional anesthesia techniques in addition to general anesthesia for postoperative pain have been in practice. Those techniques are performed under ultrasound guidance as part of multimodal analgesia in both intraoperative and postoperative periods. Among the supportive techniques, Erector spinae plane block (ESPB) was first defined for thoracic neuropathic pain treatment in 2016 and was found to provide sufficient postoperative analgesia in thoracic, breast, bariatric, and upper abdominal surgeries concerning the anatomical level applied. Although the exact mechanism of ESPB is unknown, it has gained popularity as a result of the growing number of randomized trials that have demonstrated its effectiveness**.**

Statistically meaningful increases in postoperative analgesia and reductions in opioid intake, however, can only be clinically significant if they promote a better recovery quality. Whether a relationship exists between ESPB and postoperative recovery quality is still unknown, especially in bilateral breast or chest surgeries. [8]

Postoperative recovery after surgery and anesthesia is a complex and multidimensional process. Inadequate recovery quality negatively influences both the patient and the medical team. Although a delayed return to normal activities may produce dissatisfaction with the medical service received: prolonged recovery or delayed discharge also significantly impacts the medical team's resource utilization. Therefore, we hypothesized

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that ESPB could also provide a better quality of recovery in patients who underwent Reassignment Chest surgery, as it allows effective post-operative pain control.

Psychosocial:

For the general population, pain management, physical therapy/rehabilitation, and mental health follow-ups are vital throughout the subacute phase; however, for transgender patients, this significance is even higher. To address the complicated and interrelated demands with a multipronged strategy, they will necessitate more intimate and tailored follow-up visits with each of these providers.[9]

Transgender people might not have sought medical attention out of fear of discrimination and stigma, which could have resulted in poorly managed health concerns. (Figure 3). For example, transgender HIV patients have a lower chance of viral suppression and antiretroviral therapy. This could have a detrimental effect on the healing process following surgery, along with other medical issues like increased rates of tobacco and illegal drug usage. [10, 11]

Figure 3: Transgender Ward in our Tertiary care center.

Complications

Breast augmentation procedures have minimal rates of complications, irrespective of the patient's gender identity—cisgender or transfeminine. Ten years' worth of data from the National Surgical Quality Improvement Program (NSQIP) database were recently examined by Cuccolo et al.[12] In this comprehensive research, only 5.8% of surgeries had total difficulties. Notably, genital-based operations had the highest rate of problems whereas breast-based surgeries had the lowest.

Implant migration, capsular contracture, decreased breast or nipple sensation, symmastia, and implant leakage are the same long-term problems of breast implantation that affect transfeminine patients. Revision operations can be difficult in transfeminine patients because of their weak breast tissue and skin coverage, according to anecdotal evidence. It is possible to carry out secondary procedures and get satisfactory outcomes, though. Importantly, insurance frequently does not cover revisional operations. It is recommended that patients have a comprehensive preoperative conversation regarding this. In general, breast augmentation using implants is still a safe operation. Despite being uncommon, patient remorse following breast augmentation does happen on occasion.

Conclusions

1. For transfeminine patients, breast augmentation is frequently a crucial surgical procedure. Experts will choose breast augmentation wisely, having a deep awareness of the distinct anatomical and personal requirements of transgender patients. For the transmen, we still have surgical intervention and prolonged hospital stays, again keeping the anatomy and physiological and behavioral changes. With this knowledge, healthcare professionals can safely carry out this treatment and get very satisfactory cosmetic and patient satisfaction outcomes. With the ongoing changes in the social and political landscape, we expect the number of transgender population will rise for safe anesthesia.

Ethical approval and informed consent

We didn't take ethical committee approval, because the review article doesn't involve patients directly. However, we took written informed consent for photographs of the patients.

Consent for publication:

Patients gave written/ informed consent to publish their photograph, without revealing their identity.

Funding

I declare the sources of funding were self, including financial support. There are no institutional or external sources of funding for the work.

Competing interests

There is no conflict of interest. I declare the same.

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