



Role of Perioperative Care in Transgender Patient

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An estimated 25 million people identify as transgender worldwide, approximately 1 million of whom reside within the us. The increasing visibility and acceptance of transgender people makes it likely that they're going to present generally surgical settings; therefore, perioperative health care providers must develop the knowledge and skills requisite for the safe management of transgender patients within the perioperative setting. Extant guidelines, like those published by the planet association for Transgender Health and therefore the University Of California San Francisco Center Of Excellence for Transgender Health, function critical resources to those caring for transgender patients; however, they are doing not address their unique perioperative needs. It's essential that anesthesia providers develop the knowledge and skills necessary for safely managing transgender patients within the perioperative setting. This review provides an summary of relevant terminology, the imperative for the supply of culturally sensitive care, and guidelines for preoperative, intraoperative, and postoperative management of the transgender patient.

Gender-Confirming Therapies (Hormone Therapy Versus Gender-Confirming Surgery)

Transgender individuals may undergo processes to affirm a identity different from that assigned at birth, referred to as "transition." The extent of this transition is very variable; some people don't transition in the least, some change socially, like their mannerisms and/or dress, some use techniques like binding (methods to flatten breast tissue to make a male-appearing chest) or tucking (pushing the testes into the canalis inguinalis and securing the penis back between the legs with gaff, an undergarment that flattens any bulging), and still others choose medical and/or surgical interventions. The simplified overview presented here springs from comprehensive standards and guidelines won't to support those that wish to transition.

Hormone therapy (HT) is usually the primary medical intervention for those that wish to align their physical characteristics with their identified gender. For transgender women, exogenous estrogen is employed in conjunction with anti-androgens with the goal of developing female secondary sex characteristics (eg, breast development, redistribution of fat, reduction in body hair) and minimizing male characteristics (eg, softening of skin, slowing of scalp alopecia). For transgender men, exogenous testosterone is employed to develop male secondary sex characteristics (eg, deepening vocal register, development of facial hair, increased muscle mass). Changes to coverage have increased accessibility to HT for a few transgender

people; for several, insurance remains a barrier. Transgender people may have difficulty finding medical providers who are intimate their specific health needs, including provision of hormonal therapy. Factors like lack of access to prescription hormones and therefore the desire to transition more quickly lead some transgender people to alternate sources for hormones, like the web and illicit dealers. Additionally, some transgender women may inject silicone into their breasts, buttocks, thighs, and face to feminize their appearance. The utilization of silicone injections is related to adverse outcomes like infections, silicone migration, granulomatous disease, pneumonitis, and organ failure.

Gender-confirming surgeries also are wont to transition; barriers like lack of insurance and therefore the small number of surgeons with specialty training may render this approach an unobtainable option for several. A spread of surgical approaches is out there and will be tailored to the patient. Surgical interventions for transgender women may involve breast augmentation, orchiectomy, aginoplasty, laryngeal surgery, and/or facial feminization, among others. Transgender men may undergo top surgery (mastectomy and extra reconstructive techniques) and bottom surgery, wherein the feminine organs are removed and genital reconstruction is achieved through metoidioplasty or phalloplasty, and/or facial masculinization surgery; it's important to recollect that a lot of transgender men prefer to retain their uterus and ovaries though they undergo transition-related surgeries.

The American Society of Plastic Surgery's annual report showed that in 2016, 1759 transfeminine patients and 1497 trans masculine patients underwent gender confirmation procedures, a rise of 27% and 10%, respectively, compared to 2015. However, getting a real estimate of the amount of gender confirmation surgeries isn't straightforward because many surgeries could also be conducted by other surgical subspecialties (eg, urologists, obstetrician/gynecologists, maxillofacial surgeons). A recent survey of just about 28,000 transgender individuals revealed that among people assigned female at birth, 21% had chest reconstruction, 8% hysterectomy, 1% metoidioplasty, and 1% phalloplasty. Among people assigned male at birth, 10% had undergone vaginoplasty or labiaplasty, 9% orchiectomy, 8% augmentation mammoplasty, and 6% facial surgery.

Hormone Therapy

It is important that anesthesia providers are intimate the hormonal therapies used for medical transition because these treatments may affect perioperative care. Leading sources for education regarding transgender HT and clinical practice are often guided by current evidence and expert opinion, using The Standards of look after the Health of Transsexual, Transgender and Gender-Nonconforming People, issued by the planet association for Transgender Health and integrated within the Endocrine Treatment of Transsexual Persons guidelines of The Endocrine Society. While helpful, these guidelines on the utilization and interpretation of laboratory data when transgender people are receiving hormonal therapy are predominantly supported expert opinion and anecdotal experiences. Other concerns include varying dosing regimens, sex-based laboratory reference values, and therefore the safety of short-/long-term use of HT.

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Feminizing HT consists of regimens of testosterone blockade combined with estrogens. Estrogens are available in several formulations, including oral, transdermal patches, and parenteral. Commonly used androgen blockers include spironolactone, 5 α -reductase inhibitors, like finasteride, and gonadotropin-releasing hormone agonists like leuprolide and goserelin. HT is sustained lifelong unless adverse effects preclude their use. Documented adverse effects of estrogens include a possible increased risk of venous thromboembolism (VTE), changes in lipid profile, vomiting, or migraine headache. Risk of VTE with estrogens is said to be formulation prescribed. Orally administered estrogens are more likely to extend the danger thanks to an altered balance between anticoagulant and procoagulant endogenous factors. During a Dutch study, the incidence of thrombosis was 20 times greater within the first 2 years of estrogen therapy. Risk rises in patients who smoke and people on oral estrogen preparations (conjugated estrogens and ethinylestradiol). Some surgeons advocate discontinuance of hormones 2-4 weeks before surgery. Anesthesia providers should remember that patients who are advised to prevent their hormones before surgery may experience emotional and physical effects. Common symptoms include mood swings and hot flashes. If patients stop their hormones for extended periods, this will end in reversal of the feminizing effects.

Masculinizing HT follows the principle of hormone replacement treatment of eunuchoidism by supplementing testosterone to realize testosterone laboratory values within the normal male range. Testosterone is out there in several formulations (eg, transdermal gels, patches, parenteral). Testosterone supplementation may have undesirable effects which will be detrimental during the perioperative period; accordingly, testing should specialize in identifying these abnormalities within the preoperative period. Despite the idea that there's an increased perioperative cardiovascular risk in transgender men taking testosterone to date, there's no conclusive evidence to support this. While there's triglyceride elevation (albeit no alteration in total cholesterol), myocardial infarct rates among transgender men are just one third that of their cisgender male counterparts. Adverse effects like erythrocytosis, liver dysfunction, lipid level changes, acne, and adverse psychological changes also can occur. If patients stop their hormones for extended periods, this will end in reversal of the masculinizing effects, including loss of muscle mass and resumption of menses.

Due to the very fact that complete withdrawal of hormone treatments can have a profound impact on the patient, the surgeon and endocrinologist should collaborate in making a choice on the utilization of hormones during the month before surgery and re-initiation of HT after surgery.

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