Chest Surgery for Transgender and Gender Nonconforming Individuals

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KEYWORDS

• Chest surgery • Transgender • Breast augmentation • Subcutaneous mastectomy

KEY POINTS

- Chest surgery (or top surgery) is one of the most commonly performed gender reassignment surgeries.
- Transfeminine chest surgery consists of breast augmentation with implants and/or autologous tissue.
- Transmasculine chest surgery includes mastectomy and creation of a male chest, including a male nipple-areola complex.

INTRODUCTION

Chest surgery (or top surgery) is one of the most commonly performed gender reassignment surgeries. Transfeminine chest surgery consists of breast augmentation with implants and/or autologous tissue. Transmasculine chest surgery includes mastectomy and creation of a male chest, including a male nipple-areola complex (NAC).

The World Professional Association of Transgender Health Standards of Care, version 7, offers flexible guidelines for the treatment of people experiencing gender dysphoria and puts forth the following criteria for top surgery[1]:

- A persistent, well-documented gender dysphoria
- The capacity to make a fully informed decision and to give consent for treatment
- Age of majority in a given country
- In cases of a significant medical or mental health concern present, it must be well controlled.
- Although not an explicit criterion, it is recommended that transfeminine transgender patients undergo feminizing hormone therapy (minimum 12 months) prior to breast augmentation surgery. The purpose is to maximize breast growth to obtain better surgical (aesthetic) results.

Top surgery can greatly facilitate the experience of living in a gender role that is congruent with a gender identity. This experience is required for 12 months prior to bottom surgery (vaginoplasty or phalloplasty). For some transgender people, however, top surgery may be the only surgical step that is undertaken during transition.

BREAST AUGMENTATION IN TRANS WOMEN

Introduction

For most transfeminine patients, breast augmentation (or breast reconstruction) greatly increases subjective feelings of femininity. Mammoplasty provides a more feminine profile, facilitating

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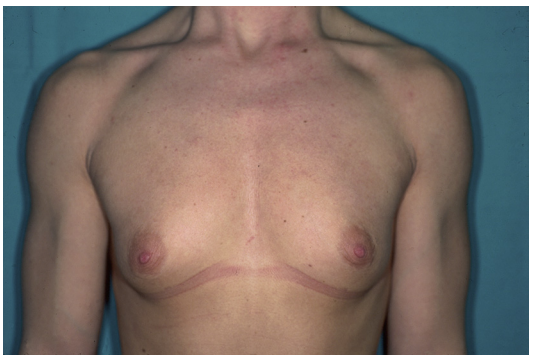

Fig. 1. Breast augmentation preoperative view.

adjustment to the gender identity (**Figs. 1** and **2**). In a prospective, noncomparative, cohort study it has been shown that the gains in breast satisfaction, psychosocial well-being, and sexual well-being after breast augmentation are statistically significant and clinically meaningful to the patient short after surgery as well as in the long term.[2]

Although some breast formation occurs after hormonal therapy, for many, it is insufficient. Unfortunately there are no studies looking in detail at the minimum period of hormone therapy that must be completed before breast surgery may be performed. Most surgeons recommend, however, a 12-month period of feminizing hormone therapy prior to breast augmentation surgery to maximize breast growth and skin expansion to obtain better surgical (aesthetic) results.

Mammogenesis in transfeminine patients receiving estrogens follows a pattern similar to female pubertal mammogenesis, as described by Marshall and Tanner.[3] Because breast development it is not exclusively dose-responsive, 67% to 75% of the trans women require an augmentation mammoplasty, because hormonal treatment only results in softly pointed breasts as seen in young girls or the small conical form seen in young adolescents (Tanner stage II or III).[4]

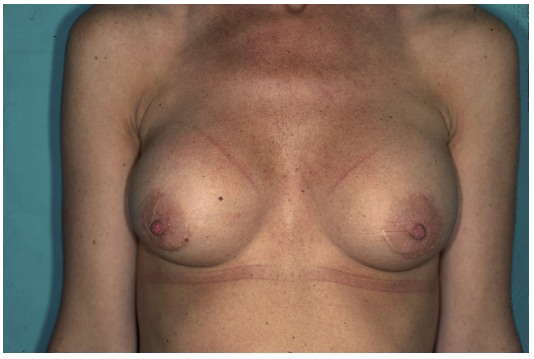

Fig. 2. Breast augmentation postoperative view.

Surgical Techniques

Breast implant

Because breast prostheses are implanted in transsexuals with young adolescent breast development, patients should be informed that the complex feminine form and age-related changes of the breast cannot be imitated by using symmetric implants. Therefore, the result of an augmentation mammoplasty in trans women with minimal hormone-induced mammogenesis may be poor.[4] Other anatomic differences, which should be taken into consideration in transfeminine transgender patients, are (1) the wider male chest, (2) a stronger pectoral fascia and a more developed pectoralis muscle, and (3) a smaller dimension of a more laterally positioned NAC. Usually a larger volume of breast implant is chosen by trans women than that chosen for breast augmentation by a cis-female patient, but even with a larger implant, it is often impossible to avoid an abnormally wide cleavage between the breasts. The nipple areola should always overlie the implant centrally and a very medial position of these implants could result in a divergent nipple position with an unacceptable breast appearance.[5]

Despite some sexual differences in chest wall and mammary anatomy, the implantation of breast implants is not essentially different from breast augmentation in a female patient, except that, usually, larger prostheses are used. The same choices apply as to the kind of implant, the position of the pocket, the surgical approach, and so forth. Patient and surgeon can choose between a silicone gel–filled implant and a saline-filled implant. In most cases, a textured implant is chosen to reduce the chance of capsular contraction. When a more cohesive gel-filled implant is chosen, it can be a round or a so-called anatomic, the latter resulting in additional filling of prominence in the lower part of breast. On the contrary, Hidalgo and Weinstein[6] reported a lack of proved aesthetic superiority of anatomic implants over round implants. The important and unique disadvantages of anatomic implants (more firm to touch, risk of rotation, and limited choice of incision) argue against their continued use in breast augmentation.

The incision can be made axillary, inframammary, or even periareolar, although the periareolar incision is less popular in trans women because of the smaller size of the areola. If an inframammary incision is used, it should be positioned lower than the preoperative inframammary fold, because the distance between the inferior areolar margin and the inframammary fold expands after augmentation mammoplasty, likely due to the recruitment of the inframammary or even abdominal skin.[4]