Aesthetic Female-to-Male Chest Transformation: Power of Combining Modified Mastectomy with a Pectoral Implant

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Summary: Gender reassignment surgery has gained in popularity with increased media exposure and society’s recognition of gender dysphoria. Female-to-male gender reassignment often begins with the “top” or chest surgery. Mastectomy with free nipple grafting is the most frequently described technique in the literature. This technique is reliable yet lacks the ability to provide a true male chest shape. We discuss our technique for female-to-male “top” surgery combining traditional mastectomy techniques with a lower pole pedicle vascularized areola and a pectoral implant. A 32-year-old African American female with bilateral C cup breast with grade 2/3 ptosis presented for “top” surgery. Intraoperatively, the nipple areola complex was maintained on a lower pole pedicle at a thickness of 1.5cm to maintain neurovascularity. A superior mastectomy flap was raised at the level of the breast capsule and remaining breast tissue excised. A lateral subpectoral pocket was created for insertion of a silicone pectoral implant. The new nipple position matured in the infero-lateral quadrant of greatest projecting portion of the chest. Lower pole pedicle provided vascularity to the areola, which avoids the need for a free nipple graft and potential hypopigmentation. Pectoral silicone implant provided upper pole fullness to mimic the male chest muscular distribution. Modification of mastectomy-based female-to-male gender reassignment surgery with a lower pole pedicle–based areola and pectoral implant provides an aesthetic improvement over the classic mastectomy with free nipple graft technique. (Plast Reconstr Surg Glob Open 2017;5:e1445; doi: 10.1097/GOX.0000000000001445; Published online 10 August 2017.)

Gender reassignment surgery has gained in popularity with increased media exposure and society’s recognition of gender dysphoria. Female-to-male chest surgery was originally described by Hoopes in 1974. The The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition officially recognized gender dysphoria as a diagnosis in 2013. Female-to-male gender reassignment often begins with the “top” or chest surgery. Mastectomy with free nipple grafting is the most frequently described technique in the literature. This technique is reliable yet lacks the ability to provide a true male chest shape. We discuss our technique for female-to-male “top” surgery combining traditional mastectomy techniques with a lower pole pedicle vascularized areola and a pectoral implant. A 32-year-old African American female with bilateral C cup breast with grade 2/3 ptosis presented for “top” surgery. Intraoperatively, the nipple areola complex was maintained on a lower pole pedicle at a thickness of 1.5cm to maintain neurovascularity. A superior mastectomy flap was raised at the level of the breast capsule and remaining breast tissue excised. A lateral subpectoral pocket was created for insertion of a silicone pectoral implant. The new nipple position matured in the infero-lateral quadrant of greatest projecting portion of the chest. Lower pole pedicle provided vascularity to the areola, which avoids the need for a free nipple graft and potential hypopigmentation. Pectoral silicone implant provided upper pole fullness to mimic the male chest muscular distribution. Modification of mastectomy-based female-to-male gender reassignment surgery with a lower pole pedicle–based areola and pectoral implant provides an aesthetic improvement over the classic mastectomy with free nipple graft technique. (Plast Reconstr Surg Glob Open 2017;5:e1445; doi: 10.1097/GOX.0000000000001445; Published online 10 August 2017.)

CASE REPORT

In January 2016, an otherwise healthy 32-year-old African American female presented requesting a gender reassignment mastectomy. The patient had no personal or family history of breast cancer and social history was negative. Psychiatric history revealed a stable well-adjusted adult. On examination, she had bilateral C cup breasts

Disclosure: The authors have no financial interest to declare in relation to the content of this article. The Article Processing Charge was paid for by the authors.
with grade 2/3 ptosis, poor-to-fair skin elasticity and 2+ nipple-areola sensation (Fig. 1).

**METHODS**

Preoperatively, the inframammary fold (IMF) was marked in the upright standing position and transposed superficially to the anterior surface skin of the breast. The area below this line represented the planned inferior pole pedicle. Intraoperatively, the nipple-NAC was marked and incised at 26 mm. The skin of the lower pole below the transposed IMF was deepithelialized. This deepithelialized lower pole, referred to as the lower pole pedicle, was raised off the underlying breast mound down to the IMF at a thickness of 1.5 cm (Fig. 2A). A superior mastectomy flap was then raised at the level of the breast capsule (Fig. 2B). The remaining breast tissue (mastectomy tissue) was excised to the level of the pectoralis fascia. A subpectoral pocket was created laterally for insertion of a pectoral implant (Implantech silicone power flex 293cc pectoral implant). The pocket was sutured closed to the fascia of the Serratus Anterior. The mastectomy flap was then closed in layers over a drain to the native IMF over the deepithelialized inferior pole pedicle. Next, the patient was flexed on the surgical bed to 90 degrees with her arms down and the new nipple position was marked in the infero-lateral quadrant of the greatest projecting portion of the chest. NAC position was double checked based on overall aesthetic impression with the inferior border of the implant positioned superior to the NAC to prevent a feminizing appearance. A nipple reduction was performed.

At 5 months postoperatively, the patient underwent an office-based local procedure reducing the diameter of her NAC. This was completed using an interlocking wagon wheel Gortex suture technique described by Hammond et al. to decrease and maintain the size of the areola. The patient was followed for a total of 7 months postoperatively.

**RESULTS**

The female-to-male mastectomy technique described here combines a subcutaneous mastectomy and a complete lower pole pedicle NAC with a pectoral implant. The modifications to the standard amputation mastectomy with free nipple graft technique resulted in aesthetic improvements of greater upper pole definition and a reliable NAC pigmentation seen at 7 month follow-up (Fig. 3).

**DISCUSSION**

The ideal male chest has a projecting muscular upper pole, a flat lower pole and a well-defined lateral border with an umbilical pointing canted sweep. The traditional amputation mastectomy with free nipple graft procedure for female-to-male mastectomy has been the gold standard technique. The classically described procedure accomplishes some but not all the important aesthetic goals. It allows the surgeon to adequately obliterate the ptotic female breast, reduce the areola diameter, and create a flat chest. Although this prepubescent appearance accomplishes the goal of removing the female form, it falls short in achieving the male appearance. The technique is efficient in time and exposure and is reproducible and reasonable to teach. Limitations do exist though, including the potential for NAC hypopigmentation, the creation
of an amorphous flat upper pole and lack of male chest lateral pectoral definition.

Our goals, when modifying past female-to-male surgical procedures, were to design a safe and reproducible technique that created a projecting, muscular upper pole, flat lower pole, defined lateral pectoral muscle border, and reliable NAC. Formation of a complete lower pole pedicle to transfer the nipple and areola maintained a reliable amount of vascularity to the complex, reducing the risk of hypopigmentation.

The addition of the pectoral implant augmented volume to the upper pole helping to mimic the masculinity of the ideal aesthetic male chest. The implant also helped define the lateral pectoral muscle border, which was lost in traditional techniques. As with any implant, the disadvantages of the pectoral implant are seroma, hematoma, infection, implant extrusion, implant displacement, or capsule formation. Pereira et al.\(^5\) presented 16 male patients undergoing pectoral implant placement for aesthetic purposes with only 3 unilateral seromas requiring nonoperative treatment. With sterile technique and proper placement, the addition of the pectoral implant enhances the male defining features to the female-to-male mastectomy.

**CONCLUSION**

Modification of an amputation mastectomy and free nipple graft female-to-male gender reassignment surgery with an inferior pole pedicle areola and the addition of a pectoral implant is an aesthetic improvement over traditional techniques.

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