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VIEWPOINT

Gender-Affirming Surgery

BRCA Mutations and the Implications in Transgender Individuals Undergoing Top Surgery: An Operative Dilemma

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Transgender patients with BRCA mutations undergoing gender-affirming mastectomies pose a great dilemma in regard to surgical decision-making. Although the clinical implications of BRCA mutations are well known, there remains a paucity of specific recommendations and guidelines in the transgender population. The unanswered questions include appropriate screening, surgical approach, and postoperative surveillance.

A bilateral prophylactic mastectomy has been shown to decrease cancer risk by 90% in patients with BRCA mutations.[1] The traditional prophylactic and oncologic mastectomy aims to remove all mammary tissue, yet chest contouring surgery for transgender individuals does not use the same anatomical boundaries. The typical utilization of the subdermal plane to ensure adequate tissue removal often results in suboptimal aesthetic outcomes. Electing for an oncologic bilateral mastectomy is at the discretion of the patient and raises clear safety concerns for BRCA positive transgender patients undergoing gender mastectomies.

Preoperative management for high-risk transgender individuals falls under the National Comprehensive Cancer Network (NCCN) recommendations for annual breast MRI screening for women aged 20–29 years, with an additional annual mammogram in women aged 30–75 years.[2] Some authors have recommended a routine mammogram before top surgery in BRCA+ individuals, patients with a family history of cancer, and those aged 35 years or older.[3] Intraoperative and postoperative management of high-risk transgender men, however, is not as well defined. The intraoperative management strongly depends on the open communication between the patient and physician in the preoperative setting. Having a clear understanding of patient expectations and wishes while simultaneously articulating what is safe and attainable is crucial for intraoperative decision-making.

There is currently minimal literature (if any) to address the question of surveillance in terms of necessity, modality, and frequency in this patient population. The NCCN does not recommend routine imaging following a full mastectomy in the setting of BRCA+ cisgender women. However, because chest contouring surgery leaves behind breast tissue, current surveillance guidelines cannot be generalized to the transgender population. It is unclear if yearly surveillance as recommended in high-risk individuals pre-mastectomy is warranted. Due to the significant removal of breast tissue, the associated cancer risk is likely decreased. However, this risk is clearly not zero and, as such, some form of surveillance may be beneficial and should be the topic of future research.

The impact of supplemental androgen hormones on the future risk of breast cancer is still not fully stratified. Studies looking at breast cancer incidence in transgender men have noted a decreased risk of breast cancer when compared with cis-women.[4,5] It is unclear if this is due to hormonal supplementation, breast tissue reduction, or a combination of both. However, these studies did not specifically look at patients with high-risk genetic mutations. Furthermore, these studies did not take into consideration nonbinary patients where hormonal supplementation is not utilized. In a time where gender-affirmation surgery is becoming more accessible, determining appropriate standard of care is pivotal. Guidelines regarding preoperative, intraoperative, and postoperative management in high-risk transgender patients are of utmost importance.

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DISCLOSURE

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