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EDITORIAL – BREAST ONCOLOGY

The Era of Flat Closure Mastectomy (Is Still Here). Are You Ready?

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For decades, the medical community has advocated for increased access to breast mound reconstruction after mastectomy for breast cancer. We have celebrated increasing rates of postmastectomy breast reconstruction (PMBR) ever since 1998 with the enactment of the Women's Health and Cancer Rights Act (WHCRA), a federal law mandating healthcare payor coverage for reconstructive procedures after oncologic breast surgery.[1] However, in this issue of *Annals of Surgical Oncology*, a study by Johnson et al.[2] evaluated national rates of "going flat" after mastectomy and found that for the first time in nearly 25 years there may be a reversal in the longstanding trend of increasing use of PMBR.[2]

Johnson and colleagues evaluated the use of PMBR among nearly 651,000 women undergoing mastectomy for breast cancer between 2004 and 2019 using data from the National Cancer Database (NCDB). Overall, 37.5% underwent immediate PMBR while 62.5% did not over the study period. They found that rates of PMBR increased between 2004 and 2014, plateaued, and then begins to decrease after 2016. This phenomenon varied by age and was most pronounced in women under the age of 50.

After decades of progress and increasing rates of PMBR, are we regressing?

Expanding access to PMBR is one of the great success stories of both women's health and recent surgical history. Initially, creation of a breast mound after mastectomy was considered cosmetic by health care payors and patients were denied coverage for the procedure. The passage of the WHCRA was the culmination of an immense effort by women's health advocates and healthcare providers who affirmed that PMBR provides significant psychosocial and quality of life (QOL) benefits and is therefore an essential (not elective) component of breast cancer recovery for many patients. However, subsequent to the passage of the WHCRA, researchers demonstrated persistent disparate access to PMBR with reconstruction rates varying by race and ethnicity, older age, geographic vulnerabilities, and socioeconomic factors. Similar to other studies showing gaps in access to breast cancer care, these studies found that reconstruction was lowest among non-Latino Hispanic and African American patients[3] and those without insurance or with government-based insurance.[4] This led to further work promoting access to PMBR, including passage of more legislation requiring documented physician–patient communication about PMBR (e.g., 2001 NY Law PBH 2803-o),[5] as well as provisions in breast center accreditation standards that ensure patients undergoing mastectomy are offered referral to plastic and reconstructive surgeons.[6]

These efforts to end disparities and improve access to breast mound reconstruction for patients who desire it continue to be imperative. However, in 2016, an article published in *The New York Times* entitled "'Going Flat' after mastectomy"[7] alerted the lay and medical community to another form of inequity going on: denied access to flat mastectomy. The article described stories of patients who felt pressured into a decision for breast mound reconstruction by their surgeon and later regretted it; or those where the surgeon intentionally left excess skin "in case of future reconstruction" despite the patient's expressed desire to be flat. Publication of this article was a significant impetus for the "going flat" movement—a national effort by patient advocacy groups on online/social media platforms seeking to increase awareness to and acceptance of flat closure as a viable option after mastectomy for those patients who do not want PMBR.

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The "going flat" movement reminds us that we cannot benchmark quality of care to rates of PMBR alone, as this does not fully capture the measures of access to quality surgical care and/or superior postmastectomy outcomes. Indeed, the decision to proceed with breast mound reconstruction is complex, and it remains true that even if patients have access to and are candidates for PMBR, many informed patients will still choose flat mastectomy.[8]

However, in the face of data indicating PMBR improves QOL and has apparent psychosocial benefits, are surgeons biased towards steering recommendations in favor of PMBR? Are they uncomfortable when patients elect against it? If this is the case, it is important to carefully evaluate and interpret this body of literature. In truth, data suggesting superior QOL outcomes with PMBR over mastectomy alone are mixed and depends on the survey or assessment tool used. For example, in a survey of 931 patients in online going flat communities, our group found that the majority of patients were happy with their surgical outcome after flat mastectomy.[9] However, at least 20% of those surveyed felt that their surgeon did not support their decision to forgo reconstruction; and it was precisely among these patients who expressed a high level of "flat denial" who were more likely to be dissatisfied with their surgical outcome and the appearance of their postmastectomy chest.

After all, foregoing breast mound reconstruction is not synonymous with abandoning the desire for a positive surgical outcome or an aesthetically pleasing chest. When intentionally designed and skillfully performed using modern surgical techniques, many aesthetic flat closures (AFC) are in fact a form of postmastectomy reconstruction**.** Whether it be a simple closure with attention to avoid dog ears and excess skin, contouring to avoid a scaphoid chest, or utilizing larger incisions with tissue advancement techniques/deepithelialized skin flaps with or without nipple grafting: there are multiple surgical strategies for AFC that can be employed according to body habitus and patient preferences. Patients deserve information about these options and access to these procedures, just as they deserve information about and access to PMBR.

Surgical decision making for breast cancer has become increasingly complex. Oncologic outcomes are often equivalent amid an expanding menu of surgical options for most patients with operable breast cancer. Thus, patient preference is increasingly at the heart of the decision, and what becomes most relevant then are: the issues of personal and financial costs (actual out-of-pocket expenses or those related to time away from work), pain and discomfort, rates of early and late complications, length of recovery, cosmetic expectations, sexual and psychosocial well-being, freedom from chronic pain, and unique values/beliefs. How an individual patient understands and prioritizes these factors is influenced by many things, including prior personal and/or peer experience, advice from family/friends, online outlets/social media, etc. However, physician interaction remains a key influencer and patients who engage in meaningful shared decision-making with their surgeon are most satisfied with their decision.[10] Thus, surgeons counseling patients with breast cancer must acknowledge that there are many valid reasons patients may choose to forgo PMBR and be comfortable offering and performing AFC.

It is important to point out that conclusions evaluating trends in postmastectomy reconstruction using national databases are limited since they do not capture the decision- making process, the occurrence of delayed PMBR, nuances of evolving flat closure techniques, etc. Within these limitations, the data presented by Johnson et al.[2] alerts us to an increasing trend of "going flat"—or a slowing in the use of immediate PMBR. However, even at the peak of PMBR use, it is worth acknowledging that less than half of patients received breast mound reconstruction. Thus, flat closure after mastectomy has been, and still is, the majority of patients undergoing mastectomy. It is time to shift away from considering high rates of PMBR as a surrogate for success. Instead, high rates of satisfaction after mastectomy should be the focus. Future progress in this area depends on research aiming to improve surgical outcomes and QOL in all patients after mastectomy, whether they undergo a simple flat closure, aesthetic flat closure, or breast mound reconstruction.

DISCLOSURE

THE AUTHOR DECLARES NO CONFLICT OF INTEREST.

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