Just the Berries

Breast reconstruction

Michael Brennan, MD, FRCSC

We have all been faced with patients who, having undergone surgery for breast cancer, want to discuss options for breast reconstruction. In this article, Dr Michael Brennan presents an approach to this question. As expert opinion, this is level 4 evidence, ie, evidence based on the opinion of respected authorities in the field who are familiar with current literature.

The topic of breast reconstruction is large. The following is a very general overview only, provided to give readers a basic understanding of the topic.

Breast cancer affects one in nine women. Surgery is usually indicated, either a lumpectomy or a modified radical mastectomy, often with adjuvant radiotherapy or chemotherapy. The consequences of mastectomy, in particular, can engender many emotional responses. Some women find little change in their self-image, their feeling of femininity, or their sense of completeness, while others are devastated by the changes in their appearance. Some are left feeling insecure about themselves; they worry about relationships with their partners and fellow workers and other aspects of their daily lives.

External prostheses are well accepted by some, but detested and abhorred by others. True depression can result from the changes incurred by mastectomy. Unfortunately, many women hesitate to seek out reconstructive surgery due to real or expected ridicule and negative comments from family and friends. All women who have a mastectomy, whether or not they are dealing with such issues, should (at least) be offered breast reconstruction.

Breast implant

The easiest way to reconstruct a breast is by using a breast implant, usually a silicone shell filled with saline. The implant is placed under the skin or under the pectoralis major muscle. The procedure might need to be preceded for a few months by the process of tissue expansion usually effected by enlarging an inflatable implant through serial injections of saline over several weeks to stretch the skin and implant pocket in preparation for a permanent implant. Reconstruction with implants, or the start of tissue expansion, if necessary, can be done at the time of mastectomy or at any time thereafter in generally healthy women. Hundreds of thousands of women around the world have had successful reconstruction in this fashion.

Autologous tissue

The criterion standard for breast reconstruction today, however, lies with use of autologous tissue only. This is done by redirecting native blood flow with its surrounding skin and fat to make a pedicle flap or by reconnecting the arteries and veins of the flap in the chest area with microvascular techniques to create a free flap. Currently, both techniques for autologous reconstruction are widely practised and accepted.

The most common donor site for such

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Dr Michael Brennan *is a plastic surgeon on staff at St Martha's Regional Hospital in Antigonish, NS.*

surgery is the abdominal fat pad or pannus, although other potential sites include the iliac crest area, the lateral thigh, and the lower buttock region. The advantage of using autologous tissue is that a softer and more natural-looking breast can usually be constructed, as compared with an implant. Patients with autologous reconstruction do not have to worry about implant deflation, migration, or infection, or painful capsular contracture.

Autologous reconstruction, however, requires substantially more time in the operating room and 5 to 7 days in hospital. Implant reconstruction requires only 1 to 2 hours in day surgery. With autologous reconstruction, the surgical risks are greater (about 5% risk of partial to total flap necrosis), although surgery is usually completely successful. Smokers are generally poor candidates for autologous reconstruction due to microvascular compromise. Women with a small abdominal pannus might be unacceptable as well. Some abdominal scars can be problematic, but this can be circumvented by using other sites or performing a free flap procedure. Transfusions are very uncommon with either technique.

Nipple reconstruction

A nipple-areolar complex can be constructed with either technique. This is usually accomplished using local flaps for nipple reconstruction and skin grafts or tattooing for areolar reconstruction. It is usually performed 3 to 6 months after mound creation, although it can be performed at the same time as well.

Oncologic considerations

Both implant and autologous tissue reconstructive techniques have been proven safe oncologically. Breast cancer can recur with or without surgery; it is usually noted superficially along the mastectomy scar line. If a recurrence is late being detected due to reconstruction, long-term survival is not altered by the surgery.

Timing of reconstruction

Breast reconstruction can be performed at the time of mastectomy if it is unlikely patients have metastases beyond the axillary basin (stages I to II). Most reconstructions in Canada are performed some time after mastectomy, but immediate reconstruction is gaining popularity. Use or timing of radiotherapy or chemotherapy does not alter the timing of autologous reconstruction. Radiotherapy when breast implants have been used, however, might lead to increased capsular contracture formation. If radiotherapy is to be used, autologous tissue reconstruction is favoured.

In summary, both reconstructive techniques are widely accepted and are generally successful. Advantages and disadvantages of both techniques should be discussed thoroughly with the surgeon to assist each patient to determine her own preferred method. The main point is that all women who have undergone mastectomy should be offered reconstruction in case it meets their personal needs and alleviates some of the psychological strain of malignancy. No patient should be neglected because she is hesitant to inquire. Most reconstructions have produced very reasonable results and highly satisfied patients.

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For further reading

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