Clinical Practice

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Reduction Mammoplasty

The problem of large pendulous breasts has been reported in the medical literature since 1510 (Rees, 1980, p. 906). Modern techniques for reduction mammoplasty were first described in the 1920s.

The most common type of breast deformity is the broad, heavy, obese breast. The second most common type of breast deformity is the pendulous, sac-like breast frequently following pregnancy or weight loss. Breast hypertrophy may occur in puberty with some breasts being overly responsive to hormonal stimuli. This condition is called virginal hypertrophy as the breast enlarges with vascular, fibrous, and stromal elements rather than the normal glandular tissues. Other causes of breast hypertrophy are pregnancy and lactation with stretching of the Cooper's ligaments, which support the breast. Finally, obese patients may have proportionately large breasts, and still other patients develop breast hypertrophy with no known cause.

Indications for Surgery

Most patients requesting breast reduction do so after considerable thought. Many women have been plagued with the symptoms of large breasts since teenage years and are in their sixties or seventies at the time of surgery, but some patients can be quite young when surgery is performed. Their complaints are usually multifactorial but revolve around the discomfort of the large breasts.

Heavy pendulous breasts are painful. Chronic mastitis may be present. Patients may be having more discomfort with premenstrual congestion. Pain in the back, neck, and shoulders are typical data. There may be evident grooves in the shoulder from bra straps. Intertinguinig dermatitis may be present in the submammary areas due to the moisture. Kyphosis and cervical spine arthritis may develop due to the postural positions required to carry the breasts. In addition to the physical symptoms, the patient will often report an inability to buy clothing and sometimes bras. They often have difficulty with sports activities. Interpersonal relationships may be strained due to the connotations placed on large breasts. A study in 1977 by Goin, Goin, and Gianni documented that some adolescents with large breasts had not incorporated their breasts into their self-image, but instead saw the breasts as handicaps and obstacles to themselves.

Insurance coverage. Some insurance companies require that at least 250 to 500 grams of tissue must be removed from each breast in order for insurance companies to approve payment for the surgery. Third party payors will usually recognize the reduction mammoplasty as a necessary reconstructive operation and authorize payment for the operation, even under special circumstances.

Assessment

The ideal candidate for breast reduction is a woman of normal weight, stature, and height. However, the ideal patient seldom appears. More commonly, women requesting breast reduction are slightly overweight to truly obese. The very obese may indeed benefit from the surgery, but the question must be raised about why the patient is only dissatisfied with her breasts and not general body size, as problems with body image and distortion must be considered. A breast history should be performed to identify patients at high risk of breast disease. The age of onset of the breast enlargement should be noted, as the etiology may be identified. Drugs currently being taken, including hormones, should be noted. The patient's desire for future pregnancy should be ascertained. The breasts should be examined with the patient sitting and lying down. With the patient sitting, the breasts should be examined for relative size, compared to body size, and symmetry. With the patient supine, the breasts can be palpated for signs of breast disease. Any questionable finding should be further assessed with mammography.

Patients need to be advised that breast feeding may be reduced or impossible as the ducts to the nipples are cut with some pedicle techniques and impossible with the free graft technique. There is commonly a transient loss of nipple sensation in patients with the flap, and patients with free graft nipple attachments often have flat nipples and shiny areola.

Technique

New nipple site. The selection of the new nipple site is crucial to the operation's success. Several techniques are available for determining the new nipple sites. Ideally, the nipple should be located near to the midclavicular line and point upward and outward. No one set of measurements can be applied to every patient as the patient's body size and chest size will determine the ideal nipple location. The patient's nipple location is marked prior to surgery with the patient sitting.

It has been the author's experience that the inferior dermal flap pedicle for breast reduction is a versatile and reliable technique (see Figure I). Originally, a bipedicled flap was used, but it became apparent that the upper pedicle was unnecessary. Nipple sensation and erection are usually preserved, both of which may be important to the patient. Enough ducts for breast feeding may or may not be preserved.

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Women with tremendously large breasts with extremely long distances from the inframammary crease to the nipple do not respond well to the pedicle flap procedure. For these women, an amputation/reduction technique with replanting of the nipple as a free graft is generally a successful technique (see Figure 2).

Blood transfusion used to be a routine part of almost every reduction mammoplasty. It is now quite rare. Improved surgical technique and a keen awareness of blood loss have almost eliminated the need for transfusion with even large tissue excisions.

**Postoperative Care**

The breasts are usually dressed in bulky dressings with the nipple exposed. The nipple should be assessed every 4 hours after surgery for signs of sluggishness and capillary refill. Changes in color or refill may indicate loss of adequate blood supply to the nipple, and the surgeon needs to be notified of the changes. Wound drains should be assessed also every 4 hours, initially for type and amount of drainage. Degree of pain should be assessed and relief of pain from analgesics documented. Pain is usually moderate in nature. The patient should lie in Semi-Fowler’s position to facilitate comfort and reduce edema. Once the dressings are removed, the woman should be placed in a front closing bra; it is not uncommon to have to measure the patient for a bra size after surgery. The typical criteria of chest size and breast size across the nipple are used. Activity is limited for a short time after surgery to allow the sutures to heal without strain on the incision line. Other postoperative instructions are included in Table 1.

**Complications**

Breast reduction is a major operation and therefore has potential complications. The overall complication rate for reduction mammoplasty varies from 10% to 25% (Rees, 1980). In most cases, there is a correlation between the amount of tissue excised and the rate of complications. Hematoma, nipple slough, skin slough, fat necrosis, nipple retraction, infection, malposition of the nipple areolar complex, unsightly scars, inclusion cysts, and sensory changes are the reported complications.

**References**

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**Additional Readings**

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(Figures and Care Plan on Pages 86 and 87)
Figure 1. The amount of breast tissue to be resected is outlined in the shaded area. The thick inferior pyramidal dermal and breast flap is shown. Note the variable width of the pedicle. (Georgiade, 1976)

Figure 2. Women with very large pendulous breasts often require partial breast amputation for reduction, as dermal pedicles to preserve the nipple are not feasible. After coning a newly shaped breast (on the diagram, the "A's" would meet and the "B's" would meet), the nipple-areola complex is replaced as a free graft.
Table 1  
Breast Reduction Instructions

Before Your Operation

1. **No aspirin or medicines containing aspirin or ibuprofen for two (2) weeks before surgery**, since it interferes with normal blood clotting. If needed, use **Tylenol®** instead. (Other products that contain aspirin and should be avoided include Alka Seltzer®, Anacin®, Ascriptin®, BC, Bufferin®, Cheracol Capsules®, ope., Coricidin®, Darvon Compound®, Fiorinal®, Dristan®, Empirin®, Excedrin®, Midol®, Sine-Aid®, Sine-Off®, Percodan®, Srendin®, riamincin, Vanquish®, Advil®, Motrin®, Medipren®, and most medications used to treat arthritis.) If in doubt, check with us.

2. You are advised to stop smoking before surgery to reduce postoperative coughing and possible bleeding. Smoking also may substantially reduce healing potential and interfere with wound healing.

3. Arrange for a responsible adult to drive you to your home when you are discharged after surgery.

4. Please bring a list of your present medications and dosages to our office on the day of your preoperative appointment.

5. If you have any questions before your surgery, please call our office weekdays between 9:00 a.m. and 5:00 p.m.

Night Before Surgery

1. You may bathe or shower in your normal routine.

2. Nothing to eat or drink after midnight.

3. Take your routine medications as directed by your physician and/or anesthesiologist.

Day of Surgery

1. Nothing to eat or drink after midnight the previous night.

2. Please do not wear makeup.

3. Leave your jewelry and personal belongings at home.

4. Take your routine medications as directed.

While in the Hospital

1. You will remain in the hospital for 1-2 days postoperatively.

2. You will wear a Mary Jane® bra postoperatively that will be put on at the time of surgery. The purpose of this bra is to hold your dressings in place and serve as a comfort measure during your healing phase.

3. Drains may be placed in the breasts at the time of surgery. These will be removed 1-2 days after surgery.

After Your Surgery

1. You may shower or bathe 24 hours after your drains have been removed.

2. You will be provided with a prescription for pain medication when you are discharged from the hospital. Take the medications according to instructions on the bottle for discomfort. **Do not take aspirin products as mentioned earlier.** If you have undue pain that the medication does not relieve, call our office.

3. You may drive a car 10-14 days after your surgery if you feel comfortable doing so.

4. Avoid heavy lifting (anything over 10 lbs.) for a period of 7-10 days.

5. Wear your Mary Jane® bra at all times. We will instruct you as to when to stop wearing it at your follow-up visits.

6. Incision lines should be cleaned with hydrogen peroxide daily, and polysporin ointment should be applied. A dry gauze should be placed over each breast and secured with your bra.

7. Your breasts will have some swelling and feel firm for a period of time after surgery. Should you experience rapid swelling or “tightness” in either or both breasts, call our office immediately.

8. Please feel free to call upon us at any time. We want you to be as comfortable as possible during your healing period.

Followup Office Visits

First: 5-7 days after surgery  
Second: 7-14 days after surgery  
Third: 4-6 weeks after surgery