

Breast Reduction

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The variations in the size of "normal breasts" may be the greatest single biological variant among women. When breasts develop to a volume of more than a liter or so, they become an encumbrance for which partial amputation is the only treatment. Although correlation of breast size with general body weight is common, there are conditions of progressive breast hypertrophy, even in patients who are not generally obese, the causes of which are not known which result in breasts so large that the nipples migrate below the umbilicus and the weight may be too great to be carried. Breast reduction can now be accomplished in such a way that a reasonably sized and shaped breast can be achieved. Usually, nipple sensation and lactation remain intact. Very large breasts, with a supersternal notch to nipple distance greater than 40 centimeters and measuring 2 liters in volume, may require nipple removal and replacement as a skin graft, in which case sensation and lactation are not likely.

Surgical techniques

Through the years there have been many variations on the techniques to attempt to aesthetically decrease the size of the breasts and these have evolved into two principle patterns.

The original "keyhole" pattern devised by Robert Wise in Houston in the 1960's remains the standard external skin pattern. However, treatment of the nipple and remaining gland has changed in recent years. It is now possible to incise the skin flaps and remove most of the gland and subcutaneous tissue from the medial/lateral upper quadrants but leave the entire central core of the breast gland, nipple and areolar complex intact. In this way it is often possible to preserve the innervation from fourth intercostal nerve to have sensate and erectile nipples.

The circumareolar, or Benelli procedure, involves the removal of a toroidal (lifesaver) section of skin and some subcutaneous fat with elevation of the nipple areolar complex and removal of a minimal amount of skin and tissue. Liposuction enables us to sculpt the remaining breast gland and remove a few hundred ccs. without additional scars. A coro-

nal stitch is passed around subcutaneously through the skin of the greater outer circle and cinched like a purse string to approximate the smaller inner areolar circle.

Advantages

The Wise pattern has the advantage of producing a well defined breast contour with dependable nipple projection and general cone shape. For the patient with medium size breasts it may be possible to maintain intact nerves and function.

The Benelli procedure has the advantage of a single circumareolar scar that has the appearance of a halo and is not perceived as a scar because of its location between the pigmented areolar and the breast skin.

Disadvantages

The Wise pattern has the disadvantage of an obvious inframammary scar shaped like a broad letter "T". Often the points of this scar being under great tension suffer from delayed healing because of the decreased blood supply to these remote corners of the flap that is fed mostly by the dermal plexis. If the breasts are too long, it may be necessary to transplant the nipple as a free graft.

The use of the circumareolar approach is limited to those breasts that are somewhat tapered in shape and those that need the minimal amount of reduction, that is, where the nipple/areolar may be raised only two or three centimeters and the volume reduction is limited to a few hundred ccs. Although the scar is only circumareolar, in time due to tension, this scar may spread and may become more noticeable in subsequent years.

Indications

Breast reduction is indicated for those patients who feel their breasts are too large for comfort. Most insurance companies will cover breast reduction if they are large breasts that cause postural changes, grooving of the shoulders from bra strap pressure, chest pain, back pain, arm and shoulder pain, and peripheral nerve compression or if the breasts are so large as to encumber the patient's work or carrying capacity, i.e. several liters in size. In males, breast reduction is also performed for

gynecomastia and this can usually be accomplished with liposuction with no incisions on the breast itself.

The procedure

Modern techniques provide for tourniquet control and local anesthesia with sedation so that breast reduction can be performed safely as an outpatient often under local anesthesia without transfusion.

Complications

Infection or hematoma can have devastating effects on usually dependable results of breast reduction. Fortunately these are very rare, occurring in less than 1% of the cases and can usually be treated as an outpatient by antibiotics and drainage. More frequently some loss of skin, ranging from a few millimeters at the wound edge to a few centimeters, may occur from pressure necrosis as a result of the tension on the wound of the inferior pole of the breasts. Some degree of this tension and necrosis may be seen in 5 or 10% of the cases and it is usually treated by watchful waiting and scar revision after six months of healing. This is more common in the largest reductions where more tension is necessary and often, even if no necrosis occurs, scar revision is indicated after a year or so once some stretching of the inferior pole may decrease the breast projection.

Although loss of sensation and lactation are always possible, it is not that common; and by far, the majority of breast reductions have good nipple-areolar sensation.

Scars

With the classic Wise pattern the scars are very prominent and obvious. These are bright pink or red lines that extend around the nipple, along the inframammary crease and the mid-portion of the bottom of the breast. After many years these scars fade so they are in a less noticeable white line although they are always present. Because there is so much weight resting on the inferior portion of these wounds, often the scars stretch considerably over a period of years. Therefore, scar revision is indicated in about 20% of these cases. After a year of stretching and equilibrium,

scar revision can restore a youthful shape and, since most of the stretching by then is complete, further revision is not likely.

Patient satisfaction

In our practice, breast reduction patients are among our happiest, even when their results are cosmetically less than pleasing due to scarring. When a woman has been encumbered with very large breasts she is physically burdened by these massive weights and feels conspicuous in any clothes. Functionally and psychologically, reduction of such breasts to a normal size has a very positive effect on the patient.

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Figure 3 is a breast reduction patient's scars at ten years.



Figure 1A is a 36 year old mother of three who has long, pendulous breasts shown here pre-operatively.



Figure 1B is the same patient shown six weeks post-operatively after breast reduction with the described technique. She has sensation to the nipples.



Figure 2A is a pre-operative view of a 17 year old with very large, pendulous breasts. The supersternal notch to nipple distance is 35 centimeters. She has postural back pain, and grooving of her shoulders from heavy bra straps.



Figure 2B is the same patient shown six weeks post-operatively. Here, the supersternal notch to nipple distance is 19 centimeters. The patient has sensation to the nipples.

Recommended reading

Plastic and Reconstructive Breast Surgery. Vol I. John Bostwick, III, MD, Quality Medical Publishing, Inc, St. Louis, Missouri, 1990.

The Breast, edited by H. Stephen Gallager, Henry Patrick Leis, Jr., Reuven K. Snyderman, Jerome A. Urban, the C.V. Mosby Company, St. Louis, Missouri, 1978.

Plastic and Reconstructive Surgery of the Breast, edited by Robert M. Goldwyn, MD, Little, Brown and Company, Boston, 1976.