

Simultaneous Breast Augmentation and Lift

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Abstract. Often, both augmentation and mastopexy are necessary to solve the problems of breast ptosis with hypoplasia. These two procedures can be done simultaneously with no increased risks. Patients who have any degree of ptosis may benefit from some lifting of the nipple areola complex if the nipple is not in the central portion of the general contour of the breast mound when seen in the upright position. A simple crescent or eccentric excision in the upper quadrant may be sufficient to lift the nipple-areola complex 1-2 cm. If the nipple needs to be moved more than a couple of centimeters, or if the distance between the nipple and the inframammary crease is already excessive, an inframammary skin excision and re-draping will be necessary. We have been using these combined techniques for 20 years with universal patient satisfaction.

Key words: Breast ptosis—Hypoplasia—Augmentation—Mastopexy

Breast reduction and lifting surgery have a remarkable background, characterized by a wide variety of distinctive procedures. Many methods for mammoplasty have been both implemented and discarded [1]. The search for the consummate method of breast reduction originated largely in the 1920s; the early procedures relied heavily on the surgeon's dexterity and the patients' "good fortune." Time and experience, however, have resulted in increasing success. There has been a seemingly constant pursuit of the perfect operation. Of these numerous procedures, several have evolved to the forefront, including those of Wise, Dufourmentel, Lejour, McKissock, and Benelli [2].

Gulyas has stated the difficulty involved in creating an aesthetically pleasing shape, especially without affecting the blood supply of the areolar complex. He recognizes that every mammoplasty entails a compromise and that increasing focus can be given to shaping the breast with an increasingly better blood supply to the nipple-areolar complex. Gulyas also recognizes that the dermal flap is the principal element in maintaining the nipple-areola blood supply during breast reduction [3]. Amidst the multitude of varying procedures there are two underlying methods from which the others stem: the first is the reduction mammoplasty with a free nipple graft and the second is the reduction mammoplasty with the transposition of the nipple areolar complex. The reduction mammoplasty with the transposition of the nipple is the primary method, as the former results in loss of nipple projection, pigmentation, and sensation (essentially, complete loss of breast function) [4].

Keyhole

Robert Wise developed a pattern for transposition of the nipple, dubbed the "keyhole," in the 1960s and it has maintained the position as the preferred external skin pattern for both reduction and lift procedures. Although this pattern is the standard, many other variations exist that provide equally good results [5]. These include the lateral procedure of Dufourmentel-Mouly. In this procedure, a single oblique excision is used to reduce both the vertical and the horizontal excess. To obtain a reduction in the excess, while simultaneously eliminating the inframammary scar medially, a new inframammary fold is made at a higher level. However, this method's application is inversely proportional to the increasing degree of hypertrophy and is, therefore, limited to cases involving a more minimal amount of skin excess [6].

Since 1989, Lejour has been applying a procedure for vertical mammoplasty, which does not create a submam-

mary scar. Her technique implements alterable markings, a more elevated pedicle for the areola, and a reduction of the breast centrally, with a minimal amount of skin undermining. The breast shape is formed by suturing the gland, without any reliance on the skin [7].

McKissock developed a technique in 1972 which is a modified version of Strombeck's method of nipple transposition. McKissock utilized a vertical (as opposed to a transverse) dermal pedicle to preserve the nipple. McKissock's method is widely used because of its simplicity and predictability and because it does not require significant intraoperative adjustments [4].

In recent years, the trend of minimizing the incision has continued with the introduction of the circumareolar, or Benelli, procedure. In this procedure, the entire gland is used as a pedicle for the areolar complex, as it and the gland are repositioned upward [1]. The Benelli has the ability both to lift the nipple a few centimeters and simultaneously to diminish the size of the areola. This method is advantageous in that it has only a single circumareolar scar which resembles a halo. As a result of the scar's position between the pigmented areolar and the skin, the appearance is inconspicuous and often not recognized as a scar. The Benelli is most applicable for cases of mild ptosis and minimal reductions, while the McKissock remains our preferred procedure for major mastopexies and reductions [5].

Materials and Methods

All of our surgery is performed with dissociative anesthesia as described by Vinnick and Baker [8,10].

Circumareolar

The Benelli procedure begins with two concentric incisions (Fig. 1). If the areola is small, the inner incision is at the border of the areola. If the areola is already too large, the inner incision is reduced to a diameter of 45 mm. A crescent of skin above the areola is marked for excision, with the upper extent of the crescent corresponding to the point where we wish to place the upper edge of the repositioned areola. The nipple is used as the center for the Padgett cookie cutter (Padgett Instruments, Inc., 1730 Walnut Street, Kansas City, MO 64108-1384, USA; 1-800-842-1029) pattern using the large-diameter circle, which is approximately 45 mm in diameter. If the areola is being reduced, the remaining excess areola is also excised. The excision is created by deepithelializing the marked area and then making a full-thickness incision about 5 mm inside the outer incision [9]. Deep dissection for the implant pocket is done medially through the existing incision. The direction is medial to avoid the innervation of the nipple and carried down subcutaneously to the sternum. The breast gland is then lifted off the pectoralis fascia. The pocket may be developed above or below the muscle for the prosthesis. The muscle is split in the direction of its fibers for a submuscular

pocket developed by blunt dissection. Using the fingertip and a retractor, expansion of the pocket can be attained after the implant has been inserted [5,9,10]. Five hundred milligrams of cefazolin and 20 mg of methyl prednisolone are then inserted into the pocket as preventive medicine. The muscle and/or breast tissue is then approximated with 4-0 Vicryl. A "coronal" stitch of 2-0 Nylon is passed through the dermis of the outer incision and pulled tight around the cookie cutter for precise size (Fig. 2). This purse string stitch around the larger outer circle is cinched to approximate the size of the smaller inner circle (the new areola). After the circular cinching stitch is complete, the edges of the skin should be fairly close together [11]. Final closure is done with inverted subdermal sutures of 4-0 Vicryl. Suture strips are then placed radially along the incision [12] (Fig. 3). The Benelli technique permits easy access of the implant, regardless of the size, leaving a discreet scar [10]. When the Benelli is used for the purpose of a breast reduction, liposuction may be implemented in order to sculpt the breast gland and remove several hundred cubic centimeters without the concern of additional scarring [5].

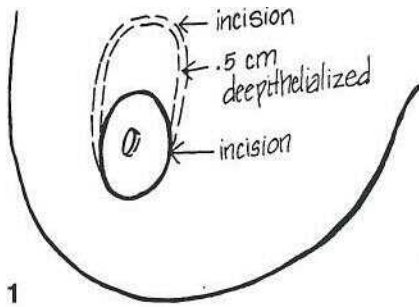
McKissock

The McKissock procedure, reserved for more exaggerated cases of hyperplasia and ptosis is begun by the outlining of the keyhole pattern with the patient standing. We agree with Lajour, as do many others, that the markings should be made on a standing and awake patient to ensure the greatest likelihood of postoperative symmetry [7]. For a major reduction mammoplasty, a vertical deepithelialized glandular bridge is created, with the areola being centrally located (Fig. 4). This dermal pedicle is narrow toward the top (at the new nipple site) and wider at the base (along the inframammary fold). Glandular resection is made medially and laterally with respect to the central flap. When the McKissock or wise pattern is used for simultaneous augmentation and lift, the vertical pedicle is not necessary. The nipple-areola complex is left on the breast mound, and the skin excision performed with minimal undermining. Deep dissection for the implant is done medially and inferiorly, similar to the above-described Benelli procedure (Fig. 5). The blood supply to the breast medially and superiorly is carefully preserved. The keyhole incisions are similarly closed with 2-0 and 4-0 polyglycolic subdermal sutures and a 5-0 running subcuticular suture for the skin. Suture strips (Genetic Laboratories, 2726 Patton Road, Saint Paul, MN 55113-1136, USA; 1-800-528-2436) are placed along the incisions [4,9,13-16].

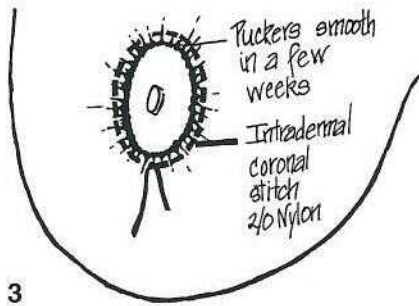
Case Studies

Patient 1

This 25 year old sought treatment for her hypotrophic breasts. She had been our patient previously for a Mc-



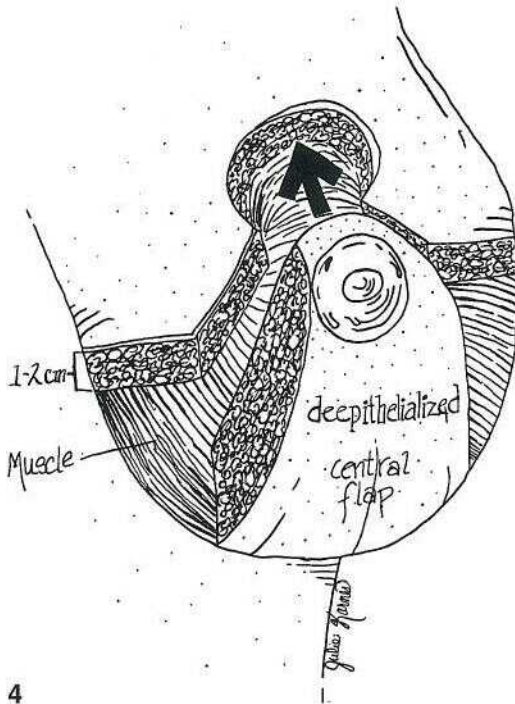
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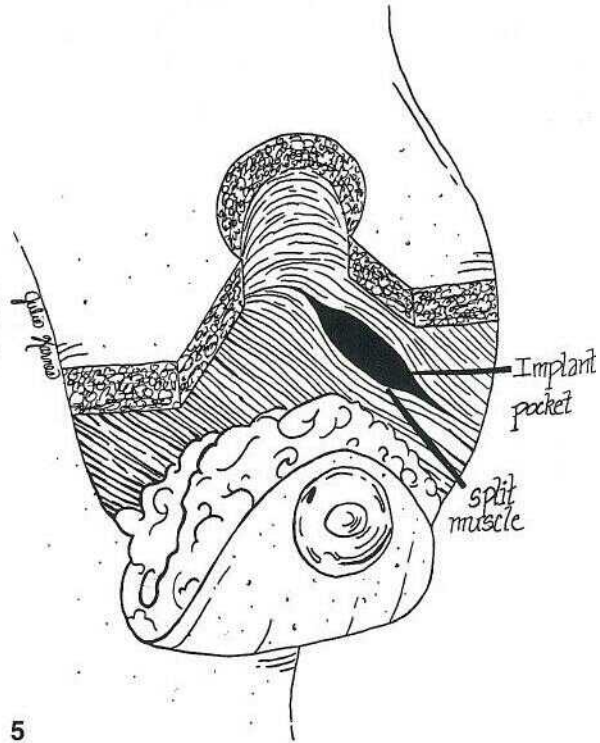
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4



5

Fig. 1. The ovoid between the two concentric incisions is de-epithelialized.

Fig. 2. The "cookie cutter" is placed in the wound between the two incisions and serves as a pattern for the coronal stitch.

Fig. 3. The puckering from the larger outer circle being pulled to the smaller inner circle smooths in a few weeks.

Fig. 4. The inferior-based nipple flap preserves sensation and circulation.

Fig. 5. The pectoral muscle is split in the direction of its fibers to give access to a submuscular pocket for the implant.

Kissock mastopexy. The implant was inserted through the inframammary area, through her existing McKissock mastopexy incisions. The 300-ml Novagold implants were placed over the muscle. The patient is shown here 2.5 years postoperatively (see Figs. 6-8).

Patient 2

This 35 year old previously had a breast augmentation performed by someone else. An inframammary approach with submuscular placement of the smooth saline Mc-

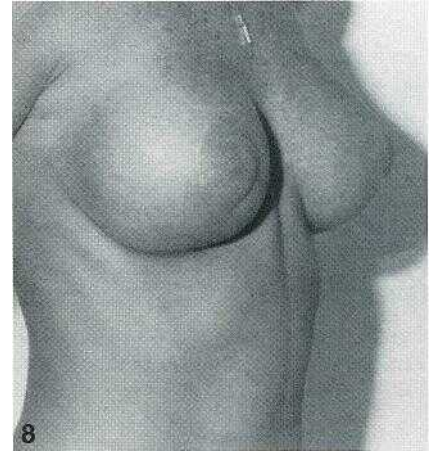
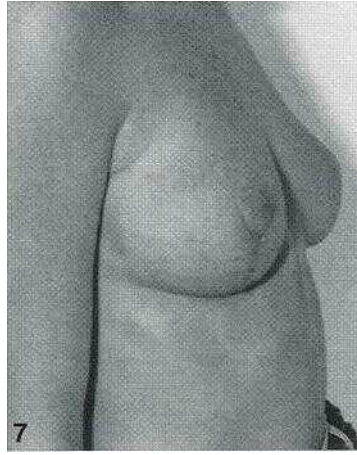
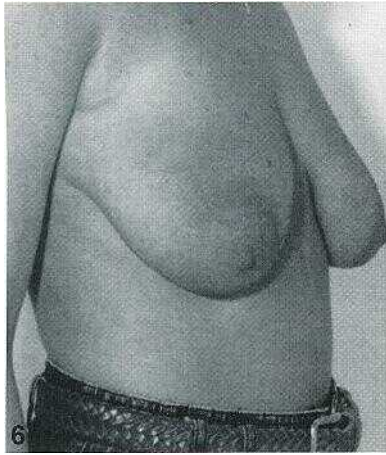


Fig. 6. Patient 1 is shown here preoperatively.

Fig. 7. Patient 1 is shown here 2 months post-McKissock lift.

Fig. 8. Patient 1 is shown here 2.5 years postaugmentation.

Gahn implants was chosen. The patient later returned seeking a solution to her grade II ptosis. The Benelli mastopexy was then used to attain the desired results. The Benelli not only solved the unsatisfactory ptosis but also corrected the appearance of the double inframammary fold resulting from the prior placement of the implants. The patient is shown here 1 month postoperatively (see Figs. 9-11).

Patient 3

This 32 year old came in seeking treatment for her micromastic breasts. She also had class I ptosis. She was interested in having her breasts enlarged and lifted. The patient underwent a simultaneous bilateral Benelli lift with bilateral augmentation. The McGhan 270-ml implants were inserted over the muscle and filled to 300 ml. The patient is shown here 6 months postoperatively (see Figs. 12 and 13).

Patient 4

This 38 year old previously had implants and came in with the desire to lift her ptotic breasts. A McKissock lift was recommended and the procedure was performed by removing skin and subcutaneous tissue along the classic Wise pattern. This patient is shown here 2 months postoperatively (see Figs. 14 and 15).

Patient 5

This 23 year old had a previous augmentation by another doctor. She sought treatment for her capsular contracture and also had the desire to undergo additional augmentation and a lift. She subsequently underwent a Benelli lift as well as a reaugmentation with a double-lumen (Misti) prosthesis of 375 ml installed with 45 ml of saline in the outer pocket, for a total volume of 420 ml (replacing a former implant of 320 ml). She later returned desiring

additional lifting and underwent a second Benelli. The patient returned again 2 years later complaining that her breasts were too large. New Misti gold implants were installed (360 ml). Seven years later, she returned and displayed a Baker 3 contracture of the right breast. Both implants were removed and a McKissock lift was performed. The patient is seen here in various stages of pre- and postsurgery (see Figs. 16-22).

Results

The methods presented here are capable of achieving the desired results with a reasonable amount of safety. Complications are limited to those normally associated with the individual procedures such as capsular contraction and scarring. The simultaneous timing of these operations does not add any additional risks.

Discussion

Variety is often found in nature; perfection is not. As plastic surgeons we attempt to add perfection to this variety. The variants among breast size and shape are expansive, with few individuals being completely satisfied with their own breasts. Women's breast appearance can deteriorate with age, becoming increasingly ptotic. Pregnancy can often contribute to the atrophy of the breast, leaving them smaller and unevenly contoured. Women who seek augmentation should be introduced to the option of a mastopexy, where applicable, because many may return at a later date seeking to correct their ptosis. Similarly, those seeking breast lifts should be presented with the option of augmentation, which not only improves breast size, but may also improve the shape [8].

A limiting factor in lifting the nipple-areola complex by circumareolar elliptical incision is the truncating or "flattening" of the cone shape of the breast. In the tubular or elongated breast this may be less noticeable. The ge-



Fig. 9. Patient 2 is shown here preoperatively.

Fig. 10. Patient 2 is shown here after placement of a 510-ml implant on the left and a 480-ml implant on the right.

Fig. 11. Patient 2 is shown here 1-month post-Benelli lift.

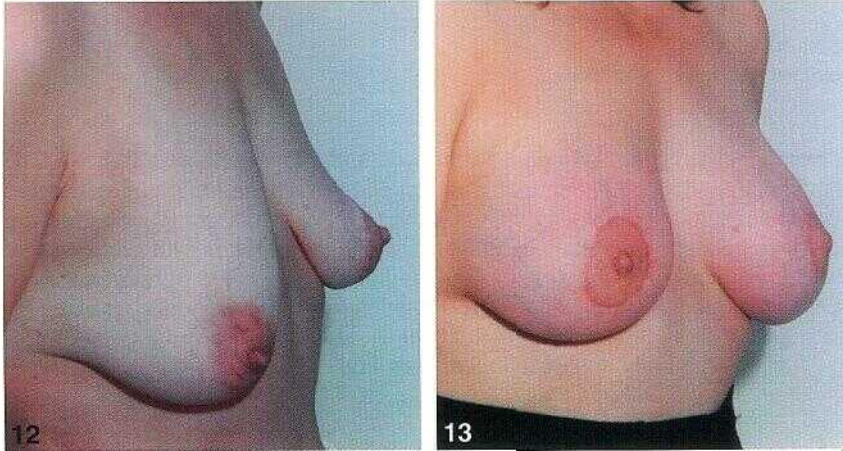


Fig. 12. Patient 3 is shown here preoperatively.

Fig. 13. Patient 3 is shown here 1 month postoperatively with breast augmentation and lift.

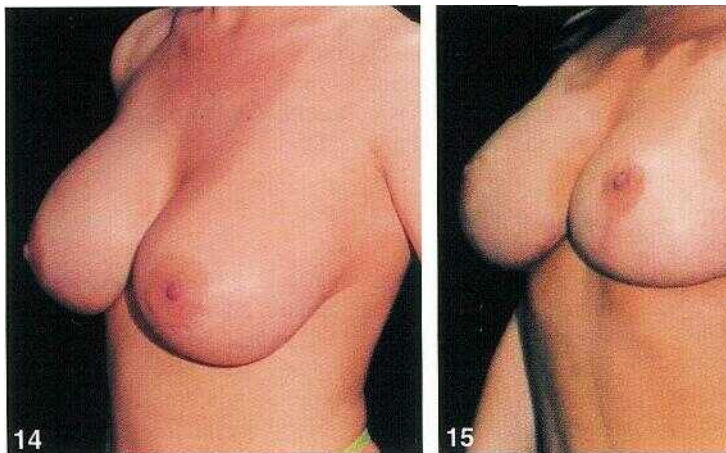


Fig. 14. Patient 4 is shown here 10 years after augmentation.

Fig. 15. Patient 4 is shown here 2 months post-McKissock lift.

ometry is well illustrated in patient number 5 when viewed from above.

Conclusion

The simultaneous implementation of these two procedures (augmentation and lift) is a rational solution to the problem of breast ptosis and hypoplasia. For certain

cases, a single procedure does not adequately resolve the problem and this becomes readily evident in these case studies. A single procedure to attain a lift may still leave the breast relatively small and possibly misshapen; and while an augmentation will improve the size, it will not correct the ptotic breast. Therefore it is advantageous to use these procedures simultaneously, thus achieving a more balanced result with less morbidity, cost, time, and recovery for the patient.



Fig. 16. Patient 5 is shown here with 320-ml implants.
Fig. 17. Patient 5 is shown here 2 months post-Benelli and re-BAM with 420-ml implants. Note the resulting truncated/flattened cone shape.
Fig. 18. Patient is shown here 1 month after a McKissock lift and removal of all implants.
Fig. 19. Patient 5 is shown here with 320-ml implants.
Fig. 20. Patient 5 is shown here 3.5 years post-Benelli and re-BAM with 420-ml implants. She is shown here with markings for a second Benelli lift.
Fig. 21. Patient 5 is shown here 4 years post-Benelli No. 3 and re-BAM with 360-ml implants. Her breasts are very hard due to capsular contracture.
Fig. 22. Patient 5 is shown here 1 month postoperatively with a McKissock lift and removal of all implants.

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