Transabdominoplasty Breast Augmentation

The author recommends transabdominal breast augmentation as a safe, straightforward procedure for patients who have completed childbearing, have minimal breast ptosis, and desire a full abdominoplasty. The use of this procedure helps avoid scars on or near the breast, maximizes the use of the abdominoplasty incision, and does not add significant surgery time. (Aesthetic Surg J 2004;24:373-378)

It is not uncommon, especially after a woman’s childbearing years, for the need for aesthetic improvement of the abdominal area to coincide with the desire for breast augmentation. Breast involution may result in laxity of the breast envelope, as well as loss of volume. Aging frequently exacerbates these changes. Recent statistics indicate that more than 50% of breast augmentations are performed in patients 19 to 34 years of age and that almost 40% are performed in patients 35 to 50 years of age. These same women are frequently left with abdominal contour changes resulting from pregnancies.

The combination of full abdominoplasty with breast augmentation offers the unique opportunity to have both procedures performed not only during the same operative session but also through the same incision. This is the basis for transabdominoplasty breast augmentation (TABA). TABA is not new. Planas first described this technique in 1976, and Barrett and Kelly published their experience in 1979.

The ideal candidate for TABA has no ptosis, pseudoptosis, or first-degree ptosis. Laxity of the breast envelope permits implant placement by way of the TABA approach, and usually the inframammary fold does not require lowering. Patients with second- or third-degree ptosis who desire breast augmentation will probably get better results by undergoing augmentation combined with mastopexy.

Operative Technique

Design and mark the abdominoplasty incision, mark the inframammary folds bilaterally, and mark the tunnels (4 to 6 cm wide) for implant insertion from a line lateral to the xiphoid and cephalad toward the central inframammary fold (Figure 1).

Infiltrate the tunnels with 10 mL of 1% lidocaine with 1:100,000 epinephrine to minimize bleeding and tissue staining during tunnel dissection.

After elevating the abdominal flap, excise the redundant abdominal pannus. You can determine the amount of tissue to be removed by flexing the operating table and using a “vest over pants” technique. Removal of redundant tissue makes the superior abdominal flap less cumbersome and easier to retract during dissection of the tunnels. I have had no difficulty closing the abdominal incision after positioning the implants.

Several long instruments are helpful, including an 11 and one quarter inch Allis tissue forceps (Pilling, Fort Washington, PA), a 9-inch needle holder, and an 8-inch Brown tissue forceps (Pilling). A lighted retractor or Deaver retractor (D4 Surgical Pvt. Ltd., Mumbai, India) is useful in the development of the tunnels (Figure 2). During tunnel dissection, use of a Bovie cautery (Aaron Medical, St. Petersburg, FL) with attached suction keeps the tunnel clear of smoke and permits better visualization. I also use an extended Bovie-tip cautery during tunnel creation.

Create the implant tunnels (usually 6–8 cm long) by elevating the soft tissue at the level of the anterior rectus sheath, similar to raising the abdominal flap during an abdominoplasty or during a pedicled transverse rectus abdominis muscle breast reconstruction. It is essential to keep the 2 tunnels separate to avoid the development of symmastia.

It is also important to know when the dissection crosses the inframammary fold; you can determine this by visualizing the breast parenchyma or pectoralis fascia and...
confirm it externally on the chest skin by means of palpation and checking of the inframammary markings. An assistant can help by manually lifting the breast off the chest. This will "tent up" the tissues while the dissection is performed. However, it is still sometimes difficult to visualize the pectoralis fascia. Placement of an Allis clamp on the pectoralis muscle or breast parenchyma helps with the dissection (Figure 3). When the Allis clamp — which grasps the soft tissue in its teeth — is lifted, the parenchyma and pectoralis muscle are tented further, and the dissection becomes easier. This maneuver may also minimize the risk of pneumothorax.7

If you want to create a subglandular pocket, retract the pectoralis downward while carrying the dissection superficial to the muscle fascia. If the dissection proceeds in a subpectoral fashion when you actually desire a subglandular pocket, it may be difficult to separate the pectoralis from the breast parenchyma. The use of an Allis clamp can provide countertraction to help develop the correct pocket.

For partial subpectoral muscle placement, divide the inferomedial muscle fibers, as is done in other techniques.8 I have found that dissecting a tunnel just medial to the center of the breast meridian permits better access to divide the pectoralis muscle fibers along its inferomedial attachments. This approach also permits direct visualization of the potential main bleeding sources.
from the internal mammary perforators. Initially I designed the pocket just lateral to the center of the breast meridian because it was easier to access the lateral border of the pectoralis muscle. However, this made it more difficult to divide the inferomedial pectoralis muscle fibers under direct vision.9

Once the subglandular or partial subpectoral pocket is developed, use urethral sounds to open the pocket further. After creating the pocket, I use a sizer to confirm implant selection and to check the pocket dimensions; minor adjustments can be made at this point. I prefer to leave the sizer in place, overexpanded by about 25% of the final fill volume of the permanent implant, while developing the other breast pocket (Figure 4).

After removing the sizer, re-create the inframammary fold. Place 2-0 PDS (Ethicon, Inc., Somerville, NJ) sutures, interrupted, to reapproximate the fold, using the previously marked inframammary fold as a guide (Figure 5). Placement of the sutures, first, diminishes the risk of accidental implant rupture. Leave the sutures untied and held in place with clamps; do not tie them until the permanent implants have been placed and filled. Perform minor adjustments in the pocket digitally, as necessary, after placing the patient in a sitting position to confirm symmetry. Next, secure the PDS and complete the abdominoplasty procedure (Figure 6).

The postoperative dressing consists of an abdominal binder for the abdominoplasty and a compression dressing (conforming tape or a surgical bra) along the inframammary fold to reinforce the repair of the inframammary fold.

Results

I have reviewed a consecutive series of 11 women, ages 24 to 42 years (mean 34 years), who underwent TABA and full abdominoplasty. Follow-up on these patients ranged from 1 to 13 months. Operative time ranged from 2 hours and 5 minutes to 4 hours and 5 minutes (the patient who was photographed to illustrate this article had the longest surgical time), with an average time of 3 hours and 10 minutes. Three patients underwent 5 additional procedures (including the operative time). Eight patients underwent partial subpectoral placement, and 3 underwent subglandular placement. All patients received round, smooth-walled saline implants with a final volume of 220 to 350 cc (Figures 7 and 8).

One complication required surgical intervention: The patient accidentally pulled out her abdominal drains sooner than instructed, resulting in the development of a pseudobursa that required removal. In the same patient, a superficial wound infection of the abdominal incision healed with local wound care.

Discussion

For those surgeons who have not tried the TABA technique, the ideal candidate will have only a short distance (2–4 cm long) requiring dissection between the rib cage to the inframammary fold. A patient with a long thorax, high inframammary folds, or both will require longer tunnels, possibly making dissection more difficult. The creation of wider tunnels (6 cm) and the use of a lighted retractor or endoscope may make the dissection easier. Placing the implant in a subglandular plane may also be easier.
Figure 7. A, C, E, Preoperative views of a 38-year-old woman. B, D, F, Postoperative views 6 months after partial subpectoral placement of 240-cc smooth, round saline implants and full abdominoplasty.
Figure 8. A, C, E, Preoperative view of a 42-year-old woman with a lower midline scar resulting from a cesarean section. B, D, F, Postoperative views 3 months after partial subpectoral placement of 240-cc round saline implants, full abdominoplasty, and suction-assisted lipectomy of the medial thighs.
Patients better suited for miniabdominoplasty or modified abdominoplasty may not provide adequate exposure for creation of the tunnels necessary for implant insertion. Most patients with second- or third-degree breast ptosis would probably benefit more from a combination of augmentation and mastopexy than from TABA. However, the occasional patient who is willing to accept less-than-ideal nipple/areolar position in exchange for the absence of scarring on or near the breasts may be considered for TABA.

Disadvantages of this procedure are similar to those with other procedures, such as transaxillary breast augmentation and transumbilical breast augmentation, in which access to the breast is gained remotely. Bleeding in the pocket may be difficult to control; changing to another more direct approach (e.g., periareolar or inframammary) may be necessary. Although I have not used an endoscope for this procedure, it can improve visualization of a bleeding source. However, most of the bleeding I have seen has resulted from release of the pectoralis muscle along the inframamcial attachments to the ribs and sternum, which is often directly visualized with this technique, especially if the tunnels are created just medial to the central breast meridian. Another disadvantage is that alteration of the inframammary fold may be difficult; however, most candidates for TABA have significant laxity of the breast envelope that makes this unnecessary.

TABA is relatively easy to perform and offers patients who request breast augmentation 2 advantages: breast enlargement and no scars on or around the breasts.

References

Bibliography

Reprint requests: Steven Wallach, MD, 1049 Sth Ave # 2D, New York, NY.
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