Transaxillary Subfascial Breast Augmentation

The author’s view is that transaxillary subfascial breast augmentation provides consistent, satisfactory results with ease of dissection. Compared with submuscular placement, this technique involves less risk of hematoma, less pain, and faster recovery, and injury to the intercostobrachial nerve is less likely. Also, there is no change of implant shape with muscle contracture. ([Aesthetic Surg J] 2003;23:480-483)

The transaxillary approach to breast augmentation is a well-established procedure with pleasing results. Its main advantage is that the scar is distant from the breast and well concealed. I offer patients both the periareolar and transaxillary approaches for breast augmentation. Ninety-six percent of my patients choose placement through the axillae because the scar will be hidden and the gland is not surgically altered.

The standard procedure for transaxillary breast augmentation is submuscular implant placement; aesthetic results are usually very satisfactory. However, submuscular placement may become obvious when pectoral muscle contraction distorts the breast, especially during exercise. The pectoralis muscle, whether the approach is periareolar or transaxillary, can flatten the submuscular implant and displace it laterally. To prevent this distortion, patients avoid certain exercises and may ultimately seek alternative implant positions.1,2 In extreme cases, the breast can demonstrate a tear trough deformity, along the lower lateral edge of the pectoralis major muscle, that is more evident with muscular activity.

Subglandular implant placement through the axilla is more natural-looking but is difficult to perform.3 The plane of dissection is not easy because the path is initially subcutaneous. Furthermore, upper-edge visibility or rippling of the implant can also be a problem, especially in thin patients.

In a recent paper, Graf et al2 reported 8 subfascial augmentations, describing how the dissection should be performed. Here I present my experience using an intermediate plane under the pectoralis fascia. I have performed 16 breast augmentations inserting silicone gel-filled, textured implants with this technique.

Subfascial breast augmentation provides consistent, satisfactory results. The surgical technique is straightforward, and, compared with submuscular placement, there is less risk of hematoma (bloodless field), less pain, and faster recovery.

Cadaver Dissections

Cadaver dissections were used to explore the feasibility and level of ease of dissection under the pectoralis fascia. Six breasts in 3 cadavers were dissected. First, transaxillary subfascial dissection was completed as in a clinical breast augmentation.

After dissection, I raised a flap from lateral to medial that included the breast, following the limits of the pocket, to check the plane of dissection and the integrity of the fascia. The pectoralis fascia remained attached to the skin side of the dissection in all cadavers. In all the cadaver dissections, the pectoral subfascial plane was not in continuity with the rectus abdominus and external oblique subfascial plane. Release of the pectoral fascia from the rectus abdominus and external oblique fascia above the level of the inframammary fold ensures that the implant will be covered by pectoralis fascia in its upper two-thirds and subglandular in its lower one-third (Figure 1, A). Laterally, the implant is also covered by fascia (Figure 1, B).

Surgical Technique

Perform preoperative marking with the patient erect. Delineate the limits of the pocket, including the new inframammary fold. If the distance between the inferior areolar margin and the inframammary fold is short, mark the inferior limit of the pocket below the original sulcus as needed. Do not lower the inframammary fold in patients with pseudoptosis.

Perform the procedure with the patient under general anesthesia and supine, with the arms abducted at 90 degrees. Infiltrate the incision, path of dissection, and
boundaries of the pocket with epinephrine 1:100,000. Make a 4- to 5-cm transverse incision within an axillary fold nearest the breast but still concealed in the axilla, and create a subcutaneous tunnel toward the pectoralis muscle edge. Incise the fascia and bluntly detach it from the muscle with a finger. I always place a temporary stitch from the fascia to the skin to avoid inadvertently tearing the fascia. Separate the fascia from the muscle with gently sweeping maneuvers as far as your finger can reach. I have found my finger more useful than an instrument because it enables me to feel how the fascia is being dissected and to detach the fascia from the muscle with-

Figure 1. Cadaver dissections. A, The anterior wall of the pocket. The arrow points to the inframammary fold. Dots mark the inferior limit of the pectoralis fascia attached to the skin. B, An implant has been inserted. The lateral wall of the pocket is still fascia (arrow).

Figure 2. A, C, Preoperative views of a 23-year-old woman with a mildly tuberous right breast and tissue deficiency at the inner lower quadrant. B, D, Postoperative views 3 months after scoring of the breast gland and subfascial implantation of a 300-cc round silicone gel-filled prosthesis in her right breast and a 260-cc round silicone gel-filled prosthesis in her left breast.
Figure 3. A, C, E, Preoperative views of a 24-year-old woman. B, D, F, Postoperative views 6 months after subfascial augmentation with 260-cc round silicone gel-filled prostheses.

Figure 4. A, C, E, Preoperative views of a 33-year-old woman with pseudoptosis. Observe the preoperative marking at the original fold. No lowering is needed. B, D, F, Postoperative views 8 months after subfascial augmentation with 350-cc round silicone gel-filled implants.
out tearing it. Now place an inflatable sizer in the pocket and fill it to its maximum. This will help identify where to disrupt the inferior pectoral fascia. Then deflate and remove the sizer and disrupt the distal insertion of the fascia to the planned level of the inframammary fold, as marked before surgery. Pack the pocket with 2 or 3 saline-soaked gauzes while the other side is dissected. Once both pockets have been created, check hemostasis with a lighted retractor or endoscope. Flex the operating table to sit the patient upright, and place implant sizers to check pocket symmetry and choose implant volume. I always place drains overnight and use a circumthoracic elastic bandage. I replace the bandage with a bra the next day, before the patient is discharged.

Between January 2001 and June 2002, I performed this surgical technique in 16 patients. All received round, textured silicone gel-filled implants, ranging from 220 to 350 cc. One patient had asymmetric tuberous type 1 breasts (Figure 2).

No postoperative complications occurred. Subcutaneous banding at the axilla was noted in 6 patients but disappeared within 3 months of surgery. There were no complaints about long-term sensory disturbances of the nipple-areolar complex or the inner aspect of the arm (intercostobrachial nerve). Capsular contracture has not developed in any patient.

Subfascial augmentation is a sound technique with good results (Figures 3 and 4). The subfascial plane is relatively easy to dissect. It is clear from my cadaver dissections and surgical experience that implant coverage is not totally subfascial and that the lower pole of the implant is under the gland. The fascia conceals the upper edge of the implant, which may be visible if a pure subglandular technique is used. Another advantage of placing the implant under the gland inferiorly is that transaxillary augmentation can be used in patients with pseudoptosis or ptosis type I. The inferior subglandular implant provides increased breast volume and pushes and rotates the gland upward. Barnett’s transaxillary augmentation in patients with mild ptosis. Tebbet’s recently described his “dual plane” technique, seeking the same goal. To avoid double folds and a double-bubble appearance, one should not lower the inframammary fold in ptotic breasts.

This technique makes it possible to work on the undersurface of the gland inferiorly. You can score the parenchyma in a patient with a mildly tuberous breast. Endoscopy in these patients is very helpful, although I think it is not usually necessary for a standard subfascial augmentation.

Summary

Transaxillary subfascial augmentation is becoming my procedure of choice for the following reasons. (1) It has all the advantages of the standard axillary-approach mammoplasty in terms of scar concealment and ease of dissection. Subfascial dissection is as easy as submuscular dissection but more straightforward than subglandular. (2) Risk of postoperative hematoma is much less. Bleeding is negligible, although I still prefer to place drains. (3) Recovery is faster than it is with submuscular placement. The surgical experience is much better in that patients experience less pain and resume their activities sooner. In my experience, patients with submuscular implants do not resume normal activities for 5 or 6 days. For patients with subfascial augmentation, this period is decreased to 2 or 3 days. (4) Injury to the intercostobrachial nerve is less likely. The dissection remains more superficial than with the submuscular technique. (5) The aesthetic result is similar to that achieved with the subglandular technique. The implant is in its natural plane; that is, under the gland. Physical activity does not provoke breast disfigurement; vigorous physical exercise may be started as soon as the stitches are removed.

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REFERENCES


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