Reassessing Minimal Incision Brachioplasty

After 4 years of experience with this technique, the author recommends using minimal incision brachioplasty (MIB) to treat mild to moderately severe upper arm soft tissue excess and laxity. However, when treating arms with gravity-induced skin furrows, he finds MIB problematic. (Aesthetic Surg J 2004;25:175-179.)

In Aesthetic Surgery Journal, July/August 2001, I described minimal incision brachioplasty (MIB), a new arm reduction technique. In this technique, the excess upper arm adipose tissue is removed by lipoplasty and the excess arm skin is removed through an elliptical axillary skin and subcutaneous tissue excision (Figures 1 through 7).

In the past 4 years of performing this technique, I have had many successes and only a few poor results. However, what I have learned is that results may be suboptimal when performing this procedure on patients with very poor skin elasticity.

I consider the results of the MIB procedure in the patient in Figure 8 quite poor. My definition of a poor result, in this context, is when a patient has achieved some postoperative improvements in arm appearance but not enough to allow her to feel comfortable enough with her appearance to wear sleeveless clothing. In this patient, her preoperative circumferential measurement at deltoid insertion was 13 inches and her circumferential measurement at mid-arm was 12-and-one-half inches. After MIB, her circumferential measurement at deltoid insertion was 11-and-one-half inches and her circumferential measurement at mid-arm was 12 inches.

In terms of postoperative outcome, this patient’s history is notable. Two years before undergoing MIB, she had undergone gastric bypass surgery and lost more than 100 pounds. I attribute the poor results of her surgery to a lack of skin elasticity after massive weight loss. Therefore, I recommend caution when performing this procedure on those who have had massive weight loss, especially when gravity-induced skin furrows are evident in the skin of the arm when resting against the chest wall (Figure 8, G).

This patient later underwent traditional brachioplasty. Postoperative results were a circumferential measurement at deltoid insertion of 11 inches and a circumferential measurement at mid arm of 10 inches (Figure 8, H). Although the axillary scar in MIB is not visible, the longitudinal scar after traditional brachioplasty is quite evident (Figure 8, I).

In contrast, the patient in Figure 9 is representative of an average successful result. Preoperatively, her circumferential measurement at deltoid insertion was 13-and-one-half inches and her circumferential measurement at mid-arm was 12-and-one-half inches. Three years after MIB, her circumferential measurement at deltoid insertion was 12-and-one-half inches and her circumferential measurement at mid-arm was 11-and-one-half inches.

I also caution against overaggressive resection of the arm skin, since “bow string” deformities can result. The intraoperative goal should be “snug” (not tight) arm skin while the arm is abducted 90 degrees.

MIB continues to be an excellent primary procedure of choice to treat mild to moderately severe upper arm soft...
Second Thoughts

Figure 1. Preoperative markings of a 46-year-old woman for axillary excision. A, The axillary area is marked with an asymmetric ellipse. B, Appearance of the asymmetric ellipse with the shoulder extended.

Figure 2. Anterior (A) and posterior (B) views of preoperative markings of the same patient for lipoplasty. Note the need to go above the bicipital groove in this patient because of a fat pad over the biceps muscle. This is uncommon in that there is usually no need to go above the meridian created by the biceps groove. This patient also was unusual in that she had previously undergone direct excision of her back rolls by another surgeon after losing 134 pounds through gastric stapling. (The proximity of this old incision did not interfere with the minimal incision brachioplasty surgery.)

Figure 3. Intraoperative view after lipoplasty of the marked areas and excision of the asymmetric ellipse.

Figure 4. Intraoperative view after advancement of the arm and chest wall skin and fascia into the axillary crease by suturing the superficial fascia, subcutaneous fat, and deep dermis to the axillary fascia with 2-0 PDS suture (Ethicon Inc., Somerville, NJ).
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Figure 5. Interrupted 3-0 Monocryl sutures (Ethicon) were used to approximate the dermis.

Figure 6. Running 4-0 Plain Gut suture (Ethicon) was used to reinforce the epidermal approximation.

Figure 7. View 3 days after surgery, just after removal of felt and Coban wraps (3M, St. Paul, MN).
Figure 8. A, C, Preoperative views of a 53-year-old woman who had lost more than 100 pounds. B, D, Postoperative views 10 weeks after MIB demonstrate a poor result. E, F, Postoperative views after traditional brachioplasty. G, Preoperative view before undergoing either brachioplasty procedure. H, Postoperative view after traditional brachioplasty and mastopexy with augmentation. I, Postoperative view after traditional brachioplasty shows longitudinal scar.
tissue excess and laxity. After performing their first MIB surgeries, surgeons have told me that this procedure is relatively easy to learn. The resultant scar is almost always extremely favorable.

Reference

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Figure 9. A, C, Preoperative views of a 47-year-old woman. B, D, E, Postoperative views 3 years after MIB demonstrate a successful result.