

Dermafascial Fixation Suture: A Technique for a More Durable Projection with Short-Scar (Vertical) Reduction Mammoplasty

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Abstract

Background: Short-scar reduction mammoplasty has several advantages over the traditional technique, mainly reduced scarring and superior long-term breast shape. Multiple modifications of the short scar reduction mammoplasty technique have been made in an effort to decrease the learning curve while improving the results. The authors present another modification of the short-scar technique for a more durable projection without reliance on a skin envelope.

Methods: The perimeters of the medial pedicle and the nipple–areola complex are marked, and the medial pedicle is deepithelialized. A 2 × 5-cm skin area at the inferior border of the pedicle is further deepithelialized, then pexied to the pectoralis fascia in a superomedial direction using a nonabsorbable monofilament suture with a horizontal mattress suturing technique.

Results: Taking the suture bites from the dermis rather than the breast parenchyma for the pexy aims to spare the pedicle's circulation. This durable internal rearrangement of the breast parenchyma with dermafascial pexy further decreases the tension at the nipple–areola complex because the final breast shape no longer relies on the skin closure. Suture spitting at the nipple–areola complex also is prevented with elimination of the purse-string suture because there is no need for a further decrease in the tension with the purse-string suture after the dermafascial pexy.

Conclusions: The authors believe that the dermafascial pexy is a concept more than a technique. It incorporates the two strongest structures, the dermis and the fascia, to achieve more durable results not only with reduction mammoplasty, but also with any aesthetic breast surgery that uses the pedicles.

Key words: Dermafascial fixation suture—Dermafascial pexy—Short-scar reduction mammoplasty

Short-scar reduction mammoplasty was first described in 1970 by Lassus [6], then later popularized by Lejour [7] and Hall-Findlay [5]. However, the technique never attained the popularity of traditional inferior pedicle reduction mammoplasty among U.S. plastic surgeons [9].

Although short-scar reduction mammoplasty has several advantages over the traditional technique, mainly reduced scarring and superior long-term breast shape, it still is perceived to be technically challenging with a long learning curve. Multiple modifications of the short-scar reduction mammoplasty technique have been made in an effort to decrease the learning curve while improving the results. We present another modification of the short-scar technique for a more durable projection without reliance on a skin envelope.

Technique

The patient is marked preoperatively in both the standing and supine positions similar to the marking described by Lejour [7]. However, a medial rather than a superior pedicle is used (Fig. 1). The perimeters of the medial pedicle and the nipple–areola complex are marked, and the medial pedicle is deepithelialized. A 2 × 5-cm skin area at the inferior border of the pedicle is further deepithelialized (Fig. 2). The skin incisions then are made, delineating the pedicle, and carried down to the chest wall. The subcutaneous and breast tissue deep to the deepithelialized skin island at



Fig. 1. Preoperative markings showing the medial pedicle and dermal flap. DF, dermal flap.

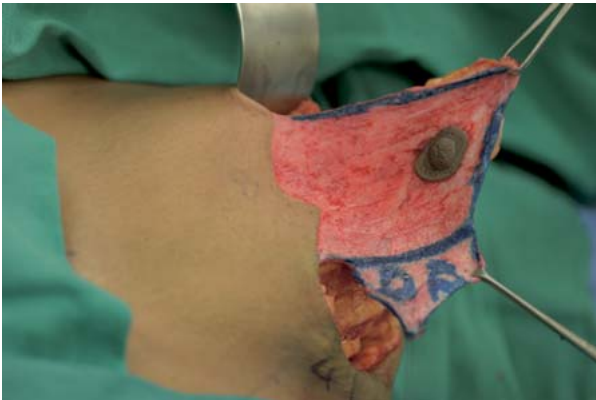


Fig. 2. Dermal flap after deepithelialization. DF, dermal flap.

the inferior border of the pedicle is further resected, creating a dermal flap attached to the medial pedicle at the inferior border. The breast resection then is completed in a routine fashion.

Next, the inferior dermal flap (below the medial pedicle) is fixed to the pectoralis fascia in a superomedial direction using a nonabsorbable monofilament suture with a horizontal mattress suturing technique (Fig. 3). This maneuver shifts the pedicle superomedially in a stable way because the two strongest structures, the dermis and the fascia, are used for fixation, as opposed to bites taken from the breast parenchyma for this purpose. This reliable dermofascial fixation gives inferior and lateral support to the medial pedicle and helps to maintain the projection obtained with the medial pedicle. The pedicle then is redraped with the skin, leaving a periareolar scar with a vertical extension.

Discussion

Although short-scar reduction mammoplasty has several advantages over the traditional inferior pedicle technique, only 15.5% of U.S. plastic surgeons use this

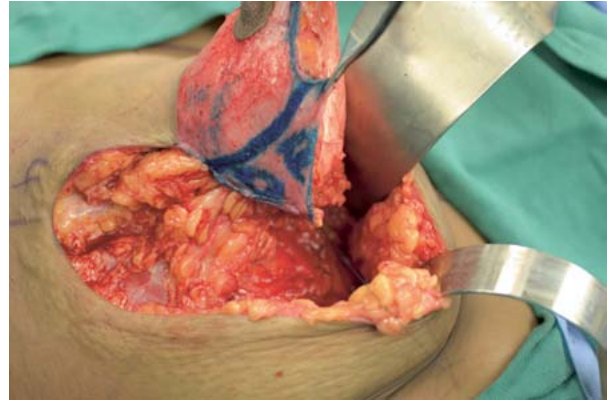


Fig. 3. Dermofascial pexy.

technique, according to the survey conducted in 2002 among the members of the American Society for Aesthetic Plastic Surgeons [9]. The short-scar technique is traditionally known to be a technically challenging procedure. Since it was first described by Lassus in 1970 [3,4,8], multiple studies in the literature describe attempts to modify it to decrease the steep learning curve and to improve the long-term results.

Suture spitting and excessive scarring at the nipple–areola complex are frequent complications of short-scar reduction mammoplasty [9]. Suture spitting is most common around the nipple–areola complex because of the purse-string sutures used to decrease the tension in this area. Elimination of the purse-string suture may decrease the chance of suture spitting at the expense of excessive scarring from increased tension. The tension also may be reduced to improve the scarring by internal rearrangements of the pedicle using fixation sutures or other supporting systems [2]. However, this may further compromise the already diminished pedicle circulation.

We recommend using dermofascial fixation sutures to minimize the aforementioned concerns. With dermofascial fixation, the two strongest structures, the dermis and the fascia, are incorporated with nonabsorbable sutures [1]. Taking the suture bites from the dermis rather than the breast parenchyma for fixation purposes spares the pedicle's circulation. This durable internal rearrangement of the breast parenchyma with dermofascial fixation further decreases the tension at the nipple–areola complex because the final breast shape no longer relies on the skin closure. Suture spitting at the nipple–areola complex also is prevented with elimination of the purse-string sutures because there is no need to decrease the tension further with the purse-string suture after the dermofascial fixation.

Summary

We believe that dermofascial fixation is a concept more than a technique. It incorporates the two strongest structures, the dermis and the fascia, to

achieve more durable results not only with reduction mammoplasty, but also with any aesthetic breast surgery that uses the pedicles.

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