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Applying the "Lejour" Technique for Augmentation Mastopexy

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Abstract

Background: Doubts are commonly cast over the safety of the single-stage augmentation mastopexy procedure. Currently, the literature is sparse. Applying the "Lejour" technique for augmentation mastopexy has provided excellent aesthetic results and significantly reduced complications. Hereby presented is this easy to learn reproducible technique, allowing one to perform both procedures together safely. To the best of our knowledge, this is the first description written in the English literature.

Methods: Over a six-year period, 53 women underwent simultaneous augmentation mastopexy using this approach. Implants (size 200-300cc, textured, Mentor®) were all placed in the subglandular plane. All procedures were performed under deep sedation, peri-operative antibiotics were administered, and patients were discharged after less than 24 hours. Complications were recorded. The patient follow-up period ranged from six months to seven years.

Results: Symmetric, aesthetic results were achieved in all patients. Only three patients (5.66%) had recurrence of breast ptosis. Two patients suffered from dehiscence of the surgical wounds, of which one required secondary suturing (1.89%). This is a much lower percentage than the 10.65% reoperation rate noted in the literature. There were no incidences of hypertrophic scarring, capsular contraction, tissue related asymmetry, hematoma, infection, fat necrosis, necrosis or loss of the nipple–areolar complex (NAC), and no NAC loss of sensation.

Conclusion: This paper suggests that with careful patient selection pooled complications and reoperation rates for single-stage augmentation-mastopexy using the "Lejour" technique are acceptably low. The three-layer coverage of the prosthesis prevents it from downward shifting and from exposure, along with preserving the longevity of the results.

Keywords: *Mastopexy; Augmentation; Breast Lift; Ptosis; Breast Ptosis; Vertical Mastopexy; Mammary Implants; Vertical Mastopexy; Lejour Technique*

Introduction

The mammary gland is considered to be one of the most aesthetic and attractive areas of the female anatomy. For that reason, surgical procedures for improving its appearance are multiple and varied. Breast ptosis is classified according to the position of the nipple in relation to the inframammary fold when the patient is in standing position [1]. There are several approaches to the correction of breast ptosis: The inverted "T" technique, first described in 1921 [2], the mastopexy with vertical subareolar scar, presented in 1925 [3], periareolar technique, described in 1969 [4], and simultaneous augmentation mastopexy [5, 6]. Plastic surgeons should weigh the advantages against limitations of each technique to correctly address breast ptosis.

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Some plastic surgeons advocate a staged approach to augmentation mastopexy surgery, with the breast-lift performed first, followed by breast augmentation several months later (or vice versa). Others embrace a simultaneous augmentation mastopexy approach [5, 6].

Several important goals are accomplished in combining mastopexy with breast augmentation: elevating the sagging breast mound, elevating the nipple/areolar complex (NAC), tightening the loose and sagging skin with minimal disfiguring scars, gaining symmetry, and increasing the volume of the breast. The two operations when performed simultaneously have some overlapping goals which can be conflicting [7].

The more common complications of the single-stage augmentation-mastopexy include: recurrent ptosis, poor or hypertrophic scarring, postoperative asymmetry of the breasts, malpositioned NAC, and capsular contracture (most common implant-related complication). Hematoma and seroma are rare, so too are malposition of the NAC and early exposure of the implant due to over tension [7-9].

The mastopexy with vertical scar gives good results with a relatively smaller scar as compared to the inverted "T" approach [9]. The periareolar approach for correction of ptosis obviously leaves fewer

scars, though widening of the scar is not rare. Moreover, this approach is reliably limited to ptosis correction only [10].

The "Lejour" technique, breast reduction areolar-vertical approach, is based on a superior areolar pedicle and parenchymal resection. Its complications are minimal, and the technique offers a good long-term cosmetic result, symmetric breasts, aesthetic scars and high patient satisfaction. It is particularly suitable for larger breasts, because it reduces aesthetic deficiencies and simplifies the reduction technique [11-14].

The "Lejour" technique is used for reduction mammoplasty, and to best of our knowledge, has never been described in the English literature for single-stage augmentation mastopexy. We are presenting an easy to learn method for this combined procedure, which has become a standard approach to augmentation mastopexy in our department. It is the purpose of this paper to introduce this technique, which facilitates one to perform both procedures together safely, with a predictable outcome.

Materials and Methods

Study Group

Over a six year period (2008-2014), 53 women, 106 breasts, underwent simultaneous augmentation mastopexy using this approach. The implants ranged between 200-300cc (textured, Mentor), all placed subglandularly. All surgeries were performed in Rambam Healthcare Campus with the patient under deep sedation. Peri-operative antibiotics were administered and patients were discharged after less than 24 hours. For a period of four weeks after the operation the patients were asked to wear a customized bra for 23 hours each day. In a retrospective chart review breast implant size, degree of preoperative asymmetry, and complications were recorded. The patient follow-up period varied between six months to seven years.

Marking the Patient

An essential part of this procedure, as with most plastic surgical procedures, is the marking of the patient. The marking was performed in a standing position, and with the patient's hands beside her body. A line connecting the midclavicular point to the nipple was drawn and was extended downwards through the inframammary line down to the chest wall. Upon this line the nipple was located as reflected from the inframammary line. Following, a keyhole shape was drawn 2 cm from the new nipple position. Then the breast was tilted gently to the sides while drawing vertical lines from the keyhole margins towards the line on the chest wall, and both lines were connected to each other 2-3 cm from the inframammary line [Figure 1].

Figure 1: Marking of the patient.

Surgical Technique

The patient was placed in the supine position with her arms abducted 90 degrees. The skin of the breast was infiltrated with a local anesthetic containing epinephrine 1:400,000 (60–100 cc per breast) before the skin incision The nipple areola complex was encircled using a "cookie cutter" 4.2 cm in diameter. The skin was de-epithelialized and cut according to the markings [Figure 2]. A pocket was developed from the inferior incision. Three flaps were then raised: two pillars from the sides, and a fat and dermal flap containing

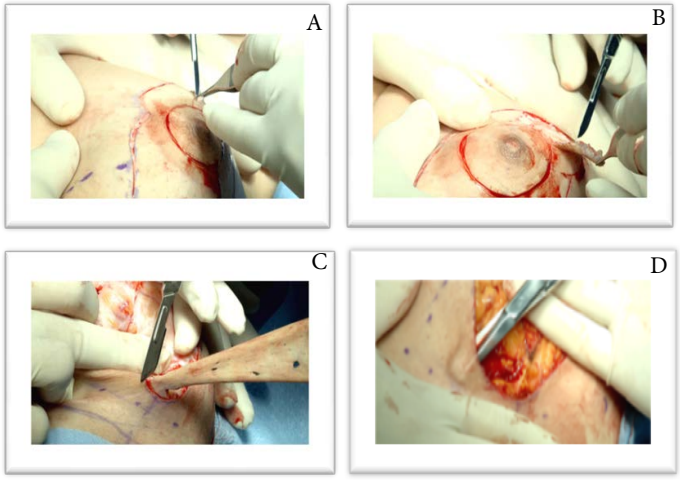

Figure 2: Pictures of the breast, showing cutting area (A), de-epithelialization (B, C) and undermining (D).

the superior pedicle (the third middle flap extending downwards from the areola, later on used for implant coverage, is the crucial step on this modified "Lejour" technique; [Figure 3]). A sizer was introduced before temporary closure by staples and evaluation of the breast. Than the sizer was replaced by a permanent silicone sizer

Figure 3: Pictures of the breast showing the area of cutting through and creating of the glandular pillars.

was replaced by a permanent silicone implant (200-300 cc) which was entirely covered by the middle flap, and the two lateral pillars were sutured above with 2/0 prolene sutures [Figure 4]. The NAC was elevated into the keyhole and the margins were adjusted to allow tension-free skin layer closure using 3/0 and 4/0 monocryl intracuticular sutures. The same technique was applied to the other breast [Figure 5 and 6] Lastly, the incisions were dressed with dry sterile Steri-Strips™ (3m). No drains were used and patients were

dressed with their supportive bras [Figure 7].

Figure 4: Insertion of the implant and suture.

Figure 5: Closure of the first breast.

Figure 6: Final look of the surgery.

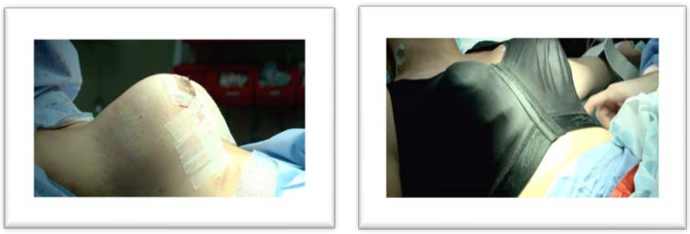

Figure 7: The incisions were dressed with dry sterile Steri-Strips and the patients were dressed with supportive bras.

Results

A total of 53 patients, 106 breasts, underwent this procedure for augmentation mastopexy between 2008 and 2014 for correction of breast ptosis. Eight patients had also suffered from breast asymmetry. All had surgery performed bilaterally, the sizes of textured implants used were 200-300cc (Mentor). The patient's follow-up period ranged from six months to seven years.

A natural looking breast shape, as well as symmetric and aesthetic results, was achieved in all cases, the resulting scars were of good quality and not objectionable to the patient or the surgeon [Figures 8-11].

Figure 8: Twenty-seven-year-old patient with no prior breast surgeries, Mentor® silicone implants, bilateral, subglandular. (A, B) Preoperative and (C, D) postoperative follow-up .

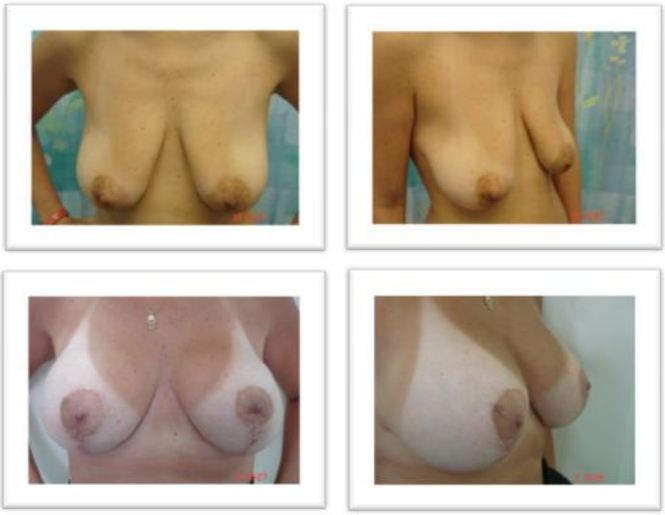

Figure 9: Patient with ptosis (A, B) Preoperative. (C, D) Postoperative, Mentor silicone implants.

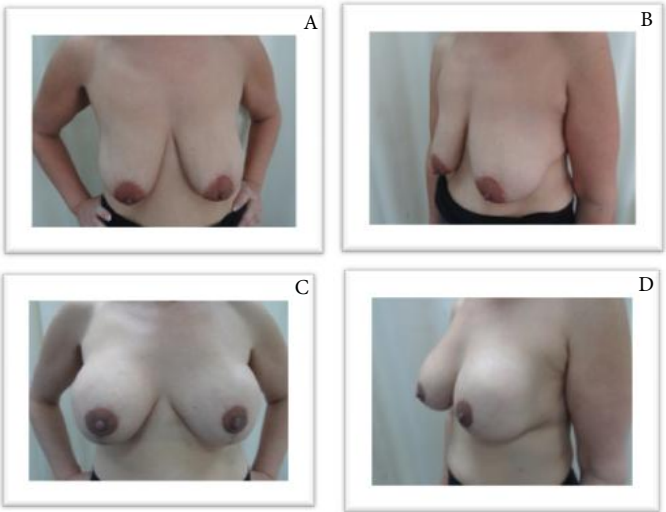

Figure 10: Major ptosis and atrophy (A, B) Preoperative. (C, D) Postoperative, Mentor silicone implants.

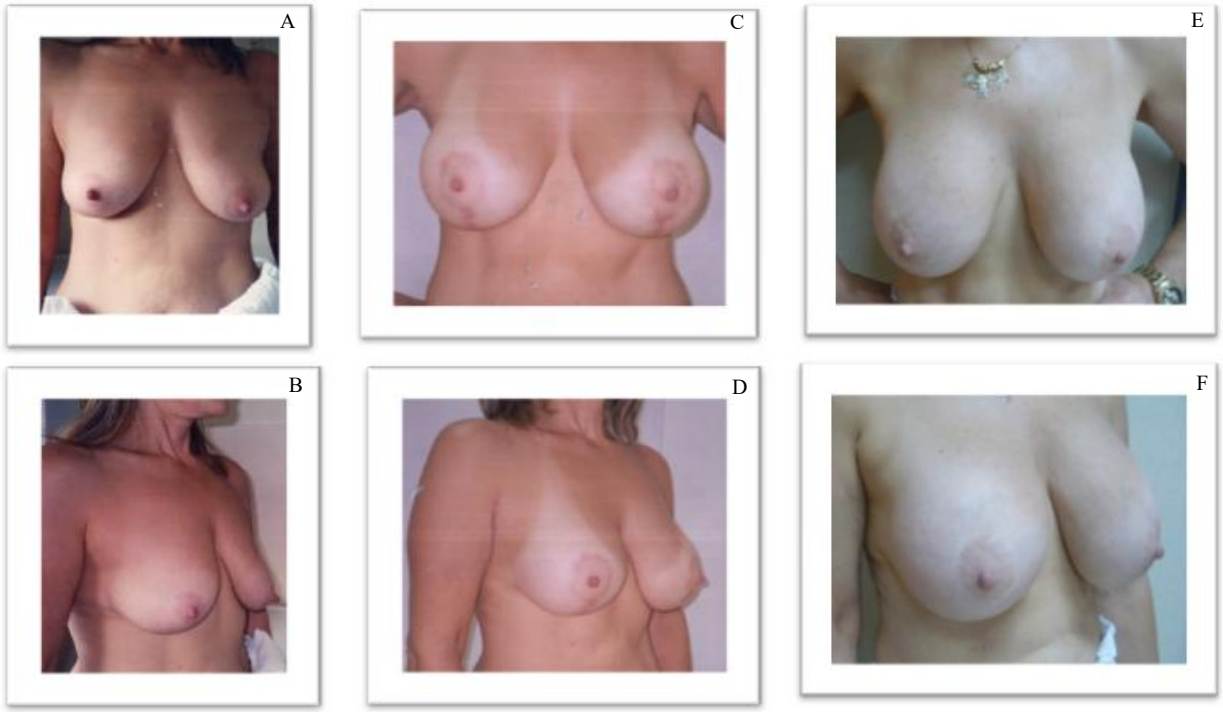

Figure 11: Ptotic breasts (A, B) Preoperative. (C, D) Postoperative (after 245 days), (E, F) Postoperative (9 years), Mentor silicone implants.

Figure 12: Dehiscence of surgical wound and secondary healing. (A, B, C) Preoperative, (D, E, F) Postoperative, after dehiscence and healing, (G,H), Dehiscence.

Two patients suffered skin dehiscence; however there was no implant exposure [Figure 12]. One was closed by re-suturing, and the other was closed by secondary intension. Only three patients (5.66%) suffered recurrence of breast ptosis, and only one patient (1.89%) required reoperation, as compared to 10.65% mentioned in past literature [7]. One patient had minimal stitch extrusion and one patient suffered from surgical wound dehiscence. There were no incidences of hypertrophic scarring, capsular contraction, tissue related asymmetry, hematoma, infection, fat necrosis, necrosis or loss of the nipple–areolar complex (NAC), nor a loss of sensation.

Discussion

Doubts are commonly cast over the safety of the single-stage augmentation mastopexy procedure, due to the difficult relocation of the NAC and the extra complications caused by using an implant. Nevertheless, some plastic surgeons advocate this simultaneous approach [5, 6]. The favorable population for this type of surgery is: low grade ptosis, implants size < 360 cc, nipple elevation < 4cm, light skin tone with good elasticity, non-smoker, normal body weight and tuberous breast [15, 16].

We described a technique that is widely used in our department of plastic & reconstructive surgery at Rambam Health Care Campus, in Israel. This novel single-stage augmentation mastopexy procedure based on the "Lejour" technique was proven to be safe and reproducible, allowing one to perform both procedures simultaneously, providing good aesthetic results with decreased complication rates [12-14].

We find this technique very suitable for patients after massive weight loss, such as the widely used bariatric surgery. The advantages of this technique are high predictability, short learning curve, three-layer coverage of the prosthesis, longevity and low complication rate. We consider the three layers coverage of the prosthesis to be the most important advantage of this technique. It contributes to the resulting longevity by preventing downward displacement of the prosthesis, and in the event of dehiscence as we have faced, there is no exposure of the prosthesis and it is completely saved. The downside of this technique, not different from any other mastopexy technique, is that it is not uncommon to have secondary ptosis, in addition to the vertical scar [17-20]. That being said, over the years only 3 patients contemplated another operation, implying on patient satisfaction with the procedure results. Regarding the scars, we found that healing is usually quite good and the scars are largely accepted by the patients.

Conclusion

This paper suggests that with careful patient selection, complication rates for single-stage augmentation-mastopexy using the "Lejour" technique are acceptably low. The learning curve is short and the benefits are worthy of the effort.

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