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Invited Discussion on: "Breast Auto-augmentation (Mastopexy and Lipofilling): An Option for Quitting Breast Implants"

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In "Breast Auto-augmentation (Mastopexy and Lipofilling): An option for quitting breast implants," the authors present a technique for modifying the size and shape of the breast following explantation. They present background on the complication rates with breast implants and use these data to support the fact that more and more women are undergoing explantation.

The authors present their experience with 26 patients undergoing implant removal, capsulectomy, mastopexy and lipofilling. Indications for implant removal included personal desire to be implant-free and to have smaller breasts, symptomatic capsular contracture or implant rupture. The average follow-up time was 18 months, and impressively, all 26 patients had a minimum of 12 months of follow-up.

The surgical procedure incorporated two previously described and well-accepted techniques in aesthetic and reconstructive breast surgery: auto-augmentation with tissue rearrangement and lipofilling. Auto-augmentation using an inferior chest wall-based flap has previously been described by the senior author [1], and lipofilling is a variation on the concept of simultaneous implant exchange with fat (SIEF) as described by Del Vecchio [2].

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Highlights of the procedure included a modified Wise pattern mastopexy, explantation and capsulectomy, lipofilling directly into the pectoralis major muscle, superior transposition of an inferior dermoglandular flap and finally lipofilling of the subdermal space. The average volume of fat injected per breast was 258 cc. The technique is well described and supported by the illustrated figures and clinical before and after photographs. Other than one patient with an oil cyst, there were no reported complications, and all patients were satisfied as defined by a two-question survey completed one year after surgery.

One of the most powerful tools that I have used in my practice is augmenting the upper pole of the breast with tissue from the lower pole (Fig. 1). Much of what I have learned regarding this procedure has come from the senior author, and for that, I am quite grateful. Due to the fact that the inferior chest wall-based flap relies on anterior perforators from the lower chest wall, I have never used this flap in patients with previously dissected implant pockets. My understanding is that all (or a majority) of perforators supplying the flap would be disrupted from the pocket dissection. The risk of this may be augmented further in the presence of a previous inframammary fold incision. The author's success of no cases of fat necrosis in the 26 patients is impressive; however, the reader should be cautioned that necrosis of the inferior flap is a real risk and may significantly impact the result, if it should occur.

My experience in managing revision breast implant patients is that many of these women have minimal glandular tissue, especially in the lower pole. Of course, there are exceptions, but this reality will limit the number of patients who are candidates for, or who will adequately benefit from transposition of lower pole tissue. It should also be noted that the majority of fat grafting was

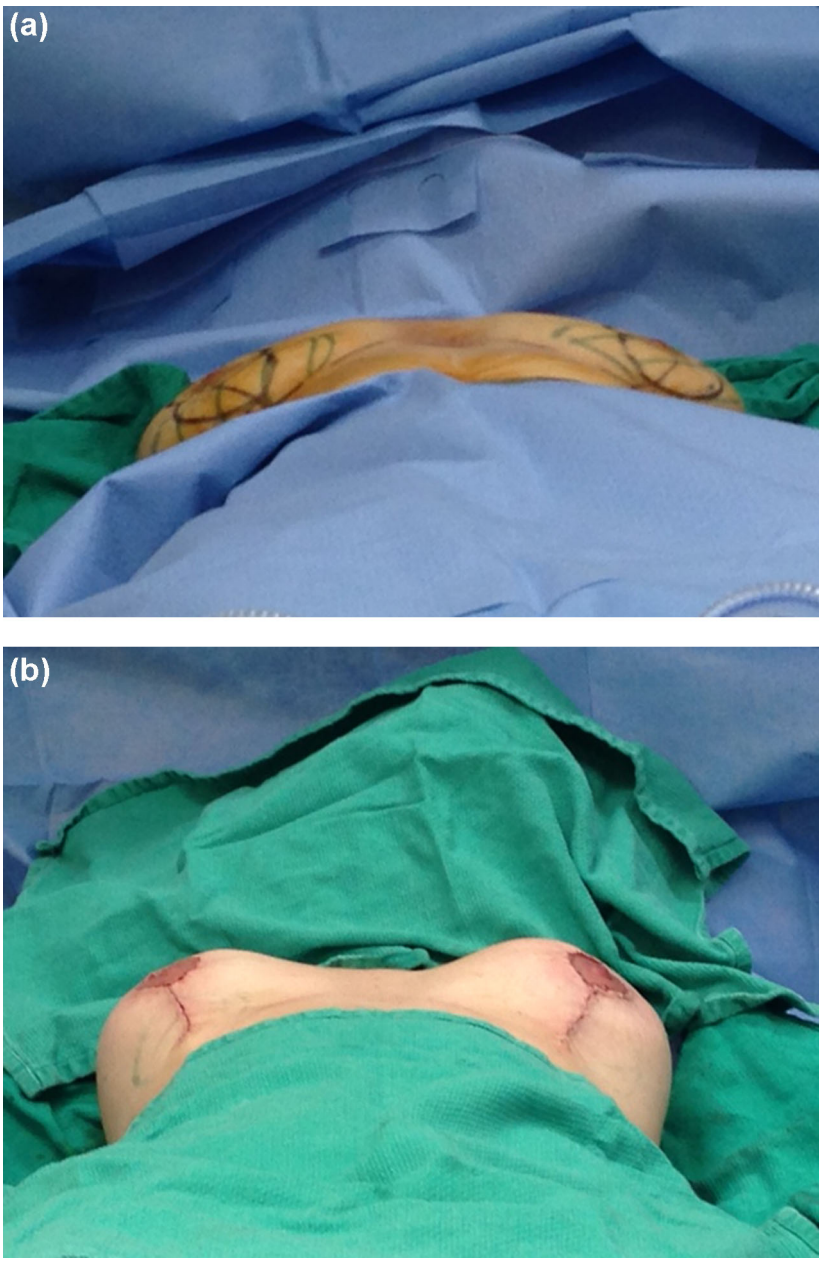

Fig. 1 **a** Patient with ptosis in a supine position prior to surgery. **b** On table supine view of same patient following inferior chest wall-based flap for auto-augmentation and circumvertical mastopexy. No implant has been used

performed within the pectoralis muscle. This is easily performed if the implants were removed from a subglandular pocket. In the case of a subpectoral pocket, the muscle would have to be reattached to the chest wall and would likely be able to accept much smaller volumes of fat. I would also add that the decision to perform a complete capsulectomy is arguably only necessary in certain situations including infection, undiagnosed capsule mass, calcification of the capsule and extracapsular implant rupture. There are also women today requesting total capsulectomy due to fear of eventually developing BIA-ALCL in a retained capsule. The authors performed capsulectomy in all patients. It is possible that maintaining the capsule on the anterior surface of the muscle may have provided a "protected" area in which to place the intramuscular fat and perhaps improve graft survival.

Along the same lines, there is significant discussion and concern today about the risks of fat embolism and death in patients undergoing buttock augmentation with fat. This has resulted in a series of recommendations to avoid injection directly in to the muscle. The author's technique involved intramuscular injection with an average volume of 200 cc per side. Although done under direct vision, with a blunt cannula and in a muscle that is smaller and less vascular than the gluteus muscle, the reader should be aware that fat embolism is a risk of any fat injection, and

especially in larger volumes and when performed directly into the muscle.

The authors should be commended for presenting an excellent series of cases incorporating a combined approach of glandular remodeling and lipofilling to maximize breast size and shape following explantation. Their results are impressive in terms of both the clinical photographs and low complication rates. It would be most interesting to perform intraoperative assessment of perfusion within the dermoglandular flaps using newer, less invasive technologies, in order to determine the pattern of blood flow within these flaps. Perhaps this will be an avenue for future research.

Compliance with Ethical Standards

Conflict of interest The author declares that he has no conflicts of interest to disclose.

Ethical Approval This article does not contain any studies with human participants or animals performed by any of the authors.Informed Consent For this type of study, informed consent is not required.

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