

Breast Augmentation in the Ptotic Breast

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At the Third International Congress of Plastic Surgery in Washington, D.C. in 1963, Cronin and Gerow¹ from Houston reported on the use of silicone gel prostheses. Before that a variety of materials such as paraffin, liquid silicone, fat and implants such as Ivalon had been tried. The original prosthesis was teardrop shaped but, according to Tom Biggs² of Houston, the shape was changed to "round" when Cronin was informed by Gustave Aufricht that breasts are round! Cronin returned to Houston and asked Dow Corning to make the implants round. Today the Texans are still arguing about whether breasts are round or teardrop

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shaped. The issue is even more confused because the latter are named "anatomical." In addition, inflatable implants using Dextran and later saline have been available since 1965. Now, forty years later, breast augmentation is the second most common cosmetic surgical procedure after liposuction in the United States. There were 249,641 procedures performed in the United States in 2002.³ This represented a 147% increase since 1997. The American Society for Aesthetic Plastic Surgery stated in its press release entitled "Breast Implant Safety: American Society for Aesthetic Plastic Surgery (ASAPS) Supports FDA Oversight" that "in 1999, the National Academy of Sciences Institute of Medicine (IOM)⁴ issued an extensive report which found no scientific evidence of an association between breast implants and disease. A recent National Institutes of Health report to Congress⁵ included its assessment of

research on the long-term health effects of breast implants. The report echoed the findings of the IOM, stating there was not sufficient evidence to support any relationship between implants and connective tissue disorders. In addition, a report of the National Cancer Institute concluded that women with implants showed a slight decrease in the risk for breast cancer."

The most common complication of breast augmentation is capsular contracture which is still unsolved although recent attempts to treat it pharmacologically await further studies (Schlesinger ASJ⁶).

One of the major problems in dealing with the hypotrophic or atrophic breast is the management of concomitant ptosis. There are two issues to resolve. The first is whether the ptosis is severe enough to alter the treatment plan from that of a straightforward augmentation. The second, in the case of severe ptosis, is deciding on appropriate surgical management.

The small hypotrophic breast without ptosis or tubular deformity usually has a loose inframammary crease which can be obliterated as the new implant pocket is created with a larger implant diameter and consequently a lower inframammary crease (IMC).

The newer higher profile patterns have the advantage of a smaller diameter which may allow for a sufficient augmentation without the lowering of a tight infra-mammary crease.

The ptotic breast may have a tight infra-mammary crease which resists dissection. In *(Continued on page 52)*



42 year-old woman Stage A (left), 360cc smooth round gel implants, one year after surgery (right)

(Continued from page 49) such cases, the distance between the areola and the IMC is usually greater; and the high profile implant with the smaller diameter may be useful in avoiding transgression of the IMC. If a tight IMC is transgressed and fails to expand sufficiently, it is recommended that the crease be reconstituted immediately with internal sutures and a smaller implant diameter used.

Boyd Burkhardt in "Aesthetic Surgery of the Breast" edited by Georgiade (1990)⁷ stated that "Significant ptosis is a contra-indication to retro-muscular augmentation unless the patient is prepared to have a ptotic breast sitting in front of a retro-muscular mound."

Ron Gruber⁸ in the same publication states that "suprapectoral augmentation is best used for moderate to severe ptosis," cautioning, however, that the implant in this location may aggravate the ptosis.

There remains a real contradiction in treatment of the hypotrophic ptotic breast. If a ptotic breast is augmented in the supra-pectoral location as recommended by Gruber, the implant will aggravate the ptosis. This is

logical when considering the tissue changes which lead to the ptosis in the first place.

However, Burkhardt cautioned that when the implant is

placed in a retro-muscular location, a double bubble appearance is created, meaning that the implant was located behind a tight inelastic IMC with an overlying ptotic breast.

This implies that the IMC is always tight in such cases, which, in my experience, is certainly not the case. A tight IMC can occur in a non-ptotic as well as a ptotic breast. Non-ptotic breasts with significant parenchyma may have more of a tendency to an inelastic IMC.

The other equally likely scenario is that the implant sits either above the original crease in its correct location or in its new location with normal expansion of the IMC, and the breast is caudal to the implant. I have called this a negative "target sign." The nipple areolar complex should lie in the center of the breast mound like the bull's-eye in a target. Signs of ptosis with an implant are loss of the target sign and a "teardrop" sign in which the

nipple may be slightly inferiorly displaced; but, in addition, the inferior breast tissue hangs off the edge of the implant rather like a teardrop. The correction of either problem usually implies a peri-areolar with or without a vertical scar mastopexy.

When I first looked at the problem in 1997, I reviewed Regnault's classification of 1976.⁹ I found it confusing in two respects. The first was that it recognized true ptosis only when the nipple reached the infra-mammary crease although I felt that by this stage, an implant alone may be insufficient to correct the problem. Glandular or pseudo-ptosis was described as an important variant. The second issue was that the Grades as they are described did not appear to be related in a practical way to treatments available. I, therefore, proposed a new classification which I presented in a course at the 67th Annual Scientific Meeting of The American Society of Plastic Surgeons in Boston in 1998¹⁰ and subsequently published as Classification and Algorithm for Treatment of Breast Ptosis: *Aesthetic Surgery Journal*, 22:355-363, July/August 2002.¹¹ This classification simply measures the distance the nipple is either above or below the IMC. Stage A begins when the nipple is 2 cm above the IMC and continues each centimeter in an alphabetic nomenclature until F which signifies 3 cm or greater below the IMC (Grade III Regnault). Stage C is when the nipple is at the IMC. The ideal position of the nipple areolar complex is 5-7 cm above the IMC in a non-augmented breast. Any descent of the nipple is a ptosis. However, it does not become surgically significant until it reaches a level 2 cm above the IMC. Glandular ptosis is a separate pathology as is the tubular or constricted breast which also requires correction, usually with a peri-areolar mastopexy.

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After creating a new classification, I described a treatment algorithm which was related to each stage of the classification. The patient with a nipple greater than 2 cm above the IMC could be managed with a breast augmentation alone. Those patients with nipples between 2 cm above and at the IMC may benefit from Simultaneous Areolar Mastopexy, Breast Augmentation (SAMBA). Patients with nipples at the (Continued on page 54)



36 year-old Stage C (left), 360cc round textured gel implants, one year follow-up (right)

(Continued from page 52) IMC to a point 2 cm below the IMC will benefit from a SAMBA procedure; and those patients with nipples greater than 2 cm below the IMC will most likely require a mastopexy utilizing a vertical scar, often combined with a peri-areolar mastopexy (Lollipop Mastopexy). I presented the Lollipop Mastopexy at the 13th Congress of the International Plastic Reconstructive and Aesthetics Surgery World Congress, 2003, Sydney, Australia.¹²

The technique of the SAMBA procedure was described in 1999 Simultaneous Areolar Mastopexy / Breast Augmentation – The SAMBA™ Procedure, Surgical Strategies for the Ptotic Breast: *Aesthetic Surgery Journal*, 19, 34-39, January/February 1999.¹³

Simultaneous mastopexy breast augmentation is one



44 year-old Stage D (left), 375cc round smooth saline 5 months post-operative (right)

of the most difficult operations which the aesthetic surgeon is called upon to perform. It can be frustrating for both the patient and the physician. Patients should be educated in advance of the risks on operating on a "moving target." In a sense, this means that we are changing

the dynamics of the breast with two procedures which balance each other. The ideal balance can sometimes be found only at the time of surgery.

Decisions have to be made intra-operatively as to the size of the implant, whether or not to release or recreate an inframammary fold, and what method of mastopexy to use. The surgeon should avoid committing himself to a specific implant size or a specific type of mastopexy before surgery.

"Tailor-tacking" should be used liberally at the time of surgery to arrive at the best shape before committing oneself to a scalpel incision. One should beware the large areola which can cause an unexpected scarcity of skin after reduction to an aesthetic diameter of 38 to 42 mm. The surgeon must be particular about the skin closure, and it is recommended that a braided non-absorbable suture be used for the peri-areolar mastopexy.

Lastly, gravity will continue its inexorable course; and any mastopexy may require re-lifting at some point in the future. A breast lift is like a face-lift in this respect. The ability of the breast to resile is limited when the elastic envelope is already compromised. **77i**

TREATMENT OPTIONS

The options available for augmentation of the ptotic breast are:

1. Breast augmentation alone
2. Breast augmentation combined with mastopexy
 - a. Peri-areolar mastopexy (PAM) alone
 - b. Vertical scar mastopexy with or without PAM
 - c. Wise pattern mastopexy with or without PAM

Option 1 is suitable for cases in which the nipple is greater than 2 cm above the IMC.

Option 2a is indicated for patients in whom the nipple is at the level of the IMC or up to 2 cm below the IMC.

Option 2a may be helpful in cases where the nipple is between 2 cm above the IMC to the level of the IMC.

Option 2b is indicated for patients where the nipple is greater than 2 cm below the IMC.

Option 2c is indicated in cases of severe ptosis where a vertical scar mastopexy is unlikely to be sufficient.

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