Invited Discussion on: Prospective Analysis and Comparison of Periareolar Excision (Delivery) Technique and Pull-through Technique for the Treatment of Gynecomastia

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Gynecomastia is a common condition of adolescent boys that results in the variable proliferation of two types of tissue in the breast. First is the development of a fibrous breast bud of varying size that is present just below the nipple and areola (NAC). Second is the associated proliferation of fat excess around the peripheral margins of the breast with possible extension through the bud most commonly seen in patients who present with obesity. Successful treatment is focused on controlled surgical excision of both of the tissue types to create a normal male chest wall contour with no irregularities being noted in the skin and fat, no depression in the area under the NAC, and minimal, imperceptible scars. To this end, traditional treatment has evolved into a combination approach using suction-assisted lipectomy (SAL) to remove the fat in conjunction with some form of direct excision of the remaining glandular elements. This is required as the fibrous breast bud is quite dense and cannot be effectively debrided with standard liposuction alone. With this in mind, the focus of this paper was to compare two different approaches for the treatment of gynecomastia that combine SAL with two different types of gland excision.

The design of the paper is excellent as the two patient cohorts were prospectively and randomly assigned to one of the two treatment methods, preoperative measurements

and symptom assessment were obtained for all patients, all procedures were done by one surgeon using the same technique for liposuction and reported follow-up was complete. All the patients in the study presented with mild gynecomastia and were classed as Simon grade 2 meaning that there was moderate breast enlargement with no to only minor skin redundancy. The two treatment methods are well described and basically involve SAL for both groups with one cohort having the remaining fibrous bud removed directly through an additional periareolar incision (open delivery group), and the second group having the retained glandular tissue removed blindly in fragments through one of the access ports used for liposuction (pull-through group). Results were obtained to evaluate the efficacy of treatment and, as well, to determine if one technique afforded any advantage over the other. Evaluation of the data showed that both techniques were effective in providing symptom relief as well as demonstrating satisfactory aesthetic results. However, due to the fact that more hematomas were noted to occur in the open delivery group than in the pull-through group (two versus none), the authors conclude that “performing the procedure via a single incision without the use of drains is a safer alternative to traditional liposuction with periareolar excision technique.”

With that being noted, certain elements of the paper merit further comment. The number of patients in each cohort is small (ten in each) which is not enough for meaningful clinical differences to be assessed. As well, the makeup of the two cohorts was different as there were twice as many less severely affected Simon grade 2A (8) patients in the pull-through group as opposed to the delivery group which had more 2B patients (4). Despite the fact that the authors state there was no clinically significant difference between the groups, this difference could well affect findings when applied to larger patient cohorts.

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Additionally, while the number of grams removed was nearly the same for each patient cohort, the pull-through technique patient cohort underwent less vigorous liposuction averaging 87 cc less per side than the direct delivery group. With more aggressive liposuction being applied to the direct delivery group, it may be that the trauma of additional liposuction in this group was responsible for the hematoma formation as opposed to differences in the way that the fibrous bud was removed. Again, with the limited number of patients enrolled in the study, it remains uncertain what was actually responsible for the difference noted with regard to hematoma formation. For this reason, the conclusion that the pull-through technique is safer than the direct periareolar excision technique is not a conclusion that can be supported by the data.

Beyond the findings related to hematoma formation, it was noted that both techniques were equally effective in terms of aesthetic and functional results, patient satisfaction, and complication rates. This is not surprising as the operative strategy described for each group offers several advantages. By first removing the excessive fatty tissue from around the breast and the centrally located fibrous bud, peripheral contouring is easily performed. Then, after the bud has been skeletonized, it is easily separated from the surrounding tissue to complete the mastectomy. Whether or not the fibrous bud is removed directly through a periareolar incision, or remotely using a blind approach via the pull-through technique likely makes little difference.

However, the ability to provide direct hemostasis through a periareolar incision may offer an attractive degree of control for many surgeons.

In summary, the study design of this paper, the techniques described, and the results obtained all offer a blueprint for success in treating moderate cases of gynecomastia. I am in agreement with the authors that both approaches are safe and effective if performed by skilled surgeons. The choice of which procedure is utilized depends on the surgeon's own preference and his or her own comfort level to use either of the two techniques. The authors are to be congratulated for a well-designed and executed project that enhances our understanding of treatment options for gynecomastia.

Compliance with Ethical Standards

Disclosures Consulting agreement with Mentor Corp., MTF, Establishment Labs, Nova Plasma Ltd., Pathy Medical LLC, W.L. Gore and Associates, Crisalix.

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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