Secondary Surgery for Failed Gynecomastia Correction From Liposuction

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A review of 18 cases of gynecomastia where liposuction was performed suggests that insufficient treatment was obtained by suction lipectomy alone as the primary method. When these patients subsequently underwent excisional surgery, removal of the gland resulted in a “dished-out” appearance.

The patients ranged in age between 24 and 46 years. All were treated for aesthetic complaints. All patients were initially treated by other surgeons, and the method of breast gland suction was unknown. However, eight patients underwent some type of partial glandular resection by scalpel, whereas the others only underwent liposuction.

At secondary surgery, all specimens removed demonstrated a sizable amount of mammary gland extending to the limits of dissection. The glands did not exhibit any anatomic alterations resulting from the first surgical procedure. Bodybuilders (n = 9) had no adipose tissue on the excised specimen or any fat under the chest flap. The remaining patients had some adipose tissue present under the chest wall and some fat retained over the excised specimen, although in small amounts.

Of the 18 patients treated, four had central mammary depression, and six had lateral depressions resulting from the absence of fatty tissue from the first procedure. All patients had a marked change in the shape of the chest wall, which, before the secondary surgery (performed by the author), had exhibited some abnormality.

Performance of liposuction alone for gynecomastia unmasks underlying mammary tissue, which when treated secondarily has a tendency to result in a contour deformity, because of the earlier removal of central or peripheral adipose tissue. Consequently, in situations where the fat contributes to the appearance of gynecomastia, it is important to combine liposuction with glandular excision during the primary operation. In conclusion, I believe certain cases of gynecomastia require glandular excision in conjunction with liposuction, particularly in obese patients.

For many plastic surgeons, liposuction has proven to be a successful treatment for pseudogynecomastia. It is a direct and easy method of removing unsightly fat deposits in the chest area of young and mature men. Nevertheless, some confusion regarding the effectiveness and the necessity of different treatment modalities arises when dealing with the various anatomic elements that contribute to gynecomastia.
This study discusses these anatomic elements and the surgical treatment of gynecomastia and reports on a series of cases of subcutaneous mastectomy as a secondary procedure for failed gynecomastia surgery performed by liposuction alone.

**Anatomy**

In men and women, the mammary gland is similarly situated and of like broadness. It extends from the sternal area to the midaxilla, and superiorly it begins approximately 2 inches below the clavicle, extending to the infra-mammary fold. In men with gynecomastia, the gland enlarges moderately at the periphery and more noticeably below and around the areola, giving it the shape of a female breast.10-13

When a surgeon performs a subcutaneous mastectomy, it is important to follow the anatomic extent of the gland for its complete extirpation, short of doing an anatomically incorrect excision.14-22 Histopathologic study demonstrates only the presence of ducts, even those far distal from the center. The remaining gland also consists of stroma surrounding these ducts (Figure 1). In men, no gland elements are found, except possibly in real pathological gynecomastia caused by hormonal problems (e.g., Klinefelter).10,12,23,24

The clinical picture of pure gynecomastia without fat excess is seen primarily in thin patients and serious bodybuilders. In most cases, a mixed gynecomastia with a fatty component (pseudogynecomastia) can sometimes be the most determinant factor (especially occurring in obese middle-aged men). In these cases the fatty element constitutes the more prominent factor, and in these cases liposuction is a useful additional surgical tool.2,25,26

According to Lejour,27 Illouz,28 and Matarasso and Courtiss,29 there is no possibility of reducing breast glandular tissue with liposuction or even with ultrasound-assisted lipoplasty, although attempts have been made by use of sharp cannulas with possibly some improvement in chest contour.

**Material and Methods**

The 18 patients were seen in consultation after having been treated by liposuction alone. The patients were not fully satisfied with the outcome: persistent deformity in and around the areola, which created a female breast shape and masked the muscular elements (Figure 2). Total or subtotal mastectomy is necessary in such cases to remove a complete and intact mammary gland (Figure 3). However, prior liposuction left the patients with a depressed central area with elevated circumference; judicious peripheral liposuction can taper this depression.

**Surgical Technique**

After the induction of general anesthesia, I infiltrate the area above and around the mammary gland with a diluted solution of Xylocaine® with epinephrine. I make a circumareolar incision leading to the gland, which is then incised through a “button” of 0.5 cm thickness. After freeing the ducts, I perform deep subcutaneous undermining over the whole surface of the gland in a skin flap similar to the one created for female patients undergoing mastectomy.
Tenaculums are applied medially to lift the gland. Then by sharp dissection and blunt dissection, the gland is freed medially and laterally to the sternum from the pectoralis fascia. The gland dissection is continued inferiorly and superiorly, freeing the gland from the fascia by sharp and blunt dissection down to the inframammary fold and up to approximately 2 inches from the clavicle. In the last stage of the procedure, the gland is liberated inferiorly from the fascia overlying the pectoralis muscle and laterally from the serratus and external oblique.

For extremely large glands, I perform a piecemeal extirpation through the small inframammary incision (Figure 4). Careful hemostasis is achieved, and a quilting suture is added to prevent hematomas and seromas. A drain is usually left in place for a few days.

If the patient has a noticeable fat component remaining after the surgical extirpation of the gland, I perform lipo-

Figure 3. A 34-year-old man with gynecomastia. A and C, After liposuction, the glandular tissue remains visible and prominent. B and D, Postoperative appearance after subcutaneous mastectomy.

Figure 4. The inframammary incision is used for glandular excision. After the areola has been elevated, the mammary ducts are sectioned. Note the Metzenbaum scissors introduced around the mammary ducts and the double hook holding the inferior areola.
suction to contour the chest wall. In older men with redundant skin and an uneven chest, the task becomes more difficult, and less than optimal aesthetic results can be expected, unless excision of the excess skin is performed.

Discussion

Selection is paramount when deciding on the treatment modality in patients with gynecomastia. If a patient has a mixed fatty and glandular gynecomastia, it is more helpful to extirpate the gland, because the chest wall can be left with a uniform fatty thickness similar to the neighboring area of the chest and the flank. Fattier excesses are better helped with liposuction at the time of the subcutaneous mastectomy when the chest contour has been distorted by the surgical extirpation of the gland. The postoperative treatment of subcutaneous gynecomastia for the 18 patients for whom lipolasty failed has yielded satisfactory results, improved contour, and relief from their concern about possible glandular problems.

Patients with secondary cases of gynecomastia correction should be warned about the possibilities of unevenness and depressions after a subcutaneous mastectomy. In all cases, unless it is refused by the patient, histopathologic control of the gland will confirm the gland’s existence and limit the possibility of an unsightly deformity because the gland is excised after the fat suction.

Conclusion

In the aforementioned cases, the proper treatment of gynecomastia consists of a thorough mammary gland excision with additional periglandular fat suction. This is preferable to the limited technique of primary liposuction when there are simultaneous glandular components. Although, at best, primary liposuction helps to contour the chest wall, it does not effectively treat the main pathologic element of gynecomastia—mammary gland hypertrophy. A careful preoperative evaluation is necessary to determine the components of the gynecomastia deformity, and addressing them accordingly will prevent inappropriate treatment.

References