

Gynecomastia: Reduction by Laserlipolysis and Transmammilar Adenectomy

CAPÍTULO



56

Diego Schavelson, Guillermo Blugerman, Gabriel Bonesana, Augusto Ponton, Anastasia Chomyszyn

Abstract

The authors present their experience in the treatment of mixed gynecomastia. The technique includes tumescent anesthesia, laserlipolysis, and a new and innovative access to the glandular tissue through a cross like transmammilar incision. This shows the possibility of resecting large portions of glandular tissue with minimal scar sequelae.

Introduction

MALE BREAST ENLARGEMENT is a frequent cosmetic defect in the Argentinean population. There are three types of gynecomastia: fatty or lipomasty, with fat as the predominant tissue; glandular, with the mammary gland as the predominant tissue; and mixed; in which both elements appear in equal proportions.

Tumescent liposuction has been used for several years in the treatment of fatty and mixed gynecomastia. In 1994, we created the term adenosuction¹ to describe those cases in which mixed gynecomastia had to be treated with the use of cutting (Becker) cannulas.

We have recently noticed a significant increase in the number of patients with high consistency mixed or glandular gynecomastia due to the use of

anabolic products containing steroids. Treatment with extraction by suction was very difficult and painful in these cases. We therefore sought an alternative treatment that would enable us to solve this problem leaving only minimal scarring.

History

The various treatment access methods we have found in the medical literature leave different type of scars,^{2,3} which are unacceptable for this type of patient (bodybuilders in general), whose main occupation is taking care of and showing off their body.⁴ These patients also regularly request hair removal on the pectoral area, thereby eliminating the usual camouflage of scars by the periareolar hair. Based on this observation, we rejected the use of periareolar, transareolomammilar, and submammary fold access. The endoscopic approach suggested by some authors is expensive and time-consuming.^{5,6}

Materials and Method

After performing clinical studies (laboratory tests, mammography, etc.) to rule out any pathological cause of gynecomastia, we use the following surgical treatment of this cosmetic problem.

The center of the tissue to be resected is under the nipple, and breastfeeding capacity need not be preserved in a man (as in the case of women). Given also that the skin in the areola is much more elastic than in the rest of the body skin, we decided to access the gland through a tiny incision on the nipple (Fig. 56-1). Through this incision we have been able to remove large amounts of mammary tissue, leaving only a minimal scar.

Surgical Technique

With the patient standing, we make preoperative markings on his breast to determine the proportion and the relative limits of both types of tissue (fat and glandular). The patient is placed in the supine position and, before surgery, administered the following premedication intravenously: 0.4 mg Fentanyl, 2.5 mg Midazolam, and 5 mg Metoclopramide. The premarked area is infiltrated with tumescent anesthesia⁸ composed of saline solution 1000 ml, lidocaine 2% 60 ml, molar bicarbonate 30 ml, and epinephrine 1 ml.

This solution is warmed at body temperature using a microwave oven. Infiltration is performed through a microcannula connected to a peristaltic pump B&S type⁷ at 10 rpm. Infiltration starts from the anterior axillary line towards the bottom of the breast, infiltrating the whole tissue from the bottom to the surface (Fig. 56-2). We generally introduce 500 ml in each breast.

After the bilateral infiltration, we proceed to the laser lipolysis of the fat tissue.⁶ We use a device Smartlipo (Deka, Calenzano, Italy) emitting an Nd:YAG laser at 1064 nm wavelength in a pulsed manner, at a frequency of 40 min with a 6W potency.

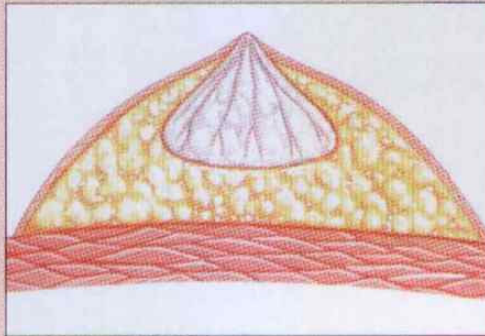
The 300 mm fiberoptic leads the laser ray to the inside to the fat tissue through a 1 mm needle guide. As it advances, the laser produces selective photothermolysis that acts on the adipocytes by

breaking their membranes, and producing a fatty emulsion on the area in a process that sounds like bursting popcorn. We can track the needle tip at all times due to the transillumination effect of the He:Ne laser, noticeable through the skin (Fig. 56-3). The laser step takes about 10 min in each breast. We then drain the resulting oily emulsion through a 4 mm Mercedes tip cannula, mounted on a vibrating handle at 1500 rpm. Using vibrating cannulas is most convenient because it allows for much finer work and reduces pain (Fig. 56-4).

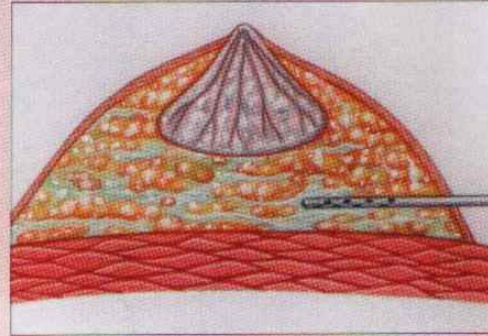
After removing the rest of the fatty tissue, it is easy to locate the remaining mammary glandule.

Using a microsurgery scalpel 65 mounted on a specially designed handle, a cross-like incision is made on the nipple (Fig. 56-5). Four well irrigated triangular flaps are thus obtained, and must be everted with traction points to prevent damage during glandule dissection. The whitish and pearly glandular tissue, which will be easily identified through the incision, is taken up with a Gillies hook or a Halsted forceps. Exercising traction on the hook, the glandule dissection process starts in the plane that joins it to the subcutaneous tissue (Figs. 56-6 e 56-7). After the glandule is liberated, it is subdivided into small portions to be removed later through the small incision. All maneuvers should be very delicate to prevent damage in the areola skin and to make sure that no devitalized tissue remains inside the newly formed cavity. It is most important to keep sufficient tissue both in the subareolar and the prepectoral plane to avoid retraction and the possible adherence of the skin to deeper planes (Figs. 56-8 e 56-9).

In most cases the only hemostatic maneuver necessary elastic compression in the immediate postoperative period. The incision is sutured joining the four triangular flaps in the middle; a flat dressing is applied, then elastic compression is applied, and the patient is instructed to relax for 24 h (Figs. 56-10A e B).



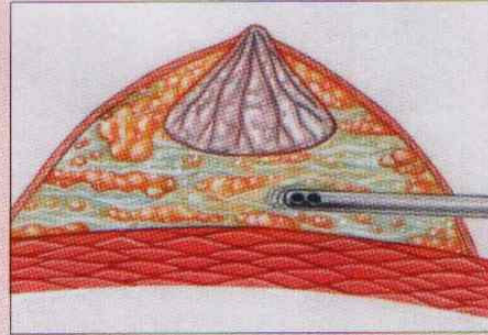
56-1



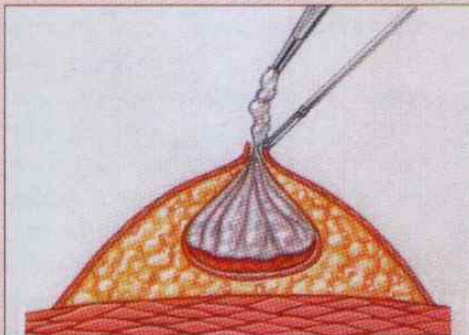
56-2



56-3



56-4



56-5



56-6

- Fig. 56-1** – Mixed gynecomastia.
Fig. 56-2 – Tumescent infiltration.
Fig. 56-3 – Laser transillumination during lipolysis stage.
Fig. 56-4 – Drainage of the fatty emulsion.
Fig. 56-5 – Glandular dissection maneuver.
Fig. 56-6 – Glandular traction with Gillies hook.



56-7



56-8

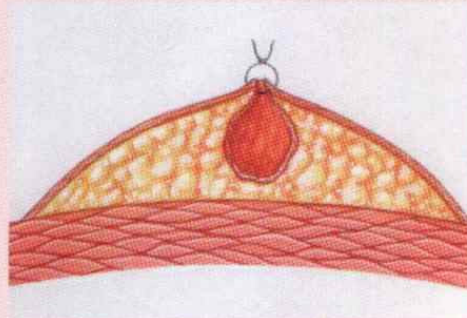
Fig. 56-7 – Transnipple glandular resection.

Fig. 56-8 – Intraoperative aspect of glandular resection.



56-9

Fig. 56-9 – Pieces of glandular tissue resected.



56-10A



56-10B

Fig. 56-10A – Final internal aspect.
Fig. 56-10B – View of the final suture.

Results

Since 1993 we have performed 540 surgeries on the male mammary area. These have included liposuction alone in 95 cases, liposuction and adenosuction in 254 cases, liposuction and transmammary adenectomy in 92 cases, laser lipolysis alone in 45 cases, laser lipolysis and transmammary adenectomy in 52 cases, skin resection in additional time in 2 cases.

The following complications have occurred: hematoma in 10 cases, asymmetry in 14 cases, hypocorrection in 30 cases, hypercorrection in 1 case, fibrosis in 20 cases, nipple necrosis in 1 case and skin flaccidity in 2 cases.

Hematomas require drainage by puncture.

Both asymmetries and hypocorrection require a secondary corrective surgery. In the cases of overcorrection, 10 ml liposucted fat was grafted into the depressed area with satisfactory results.

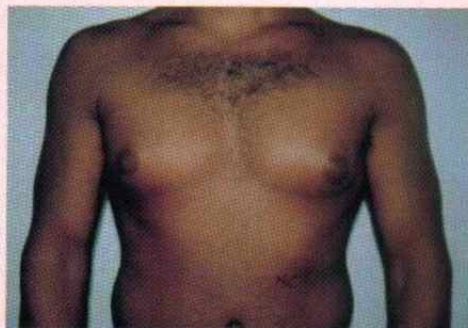
The first cases of scar fibrosis were infiltrated with triamcinolone. Later on, over the last year, intralesional 5-fluorouracil injections were most successful. In the cases of skin flaccidity, we used skin resection from the submammary fold, creating a tunnel to transpose the nipple-areolar complex.

Conclusions

A mixed technique is presented for the treatment of mixed gynecomastia based on the use of an Nd:YAG laser to produce laser lipolysis and then transmammary resection of the remaining mammary glandule. The results from the application of this technique have been highly satisfactory and the rate of complications quite low (Figs. 56-11 a 56-14).



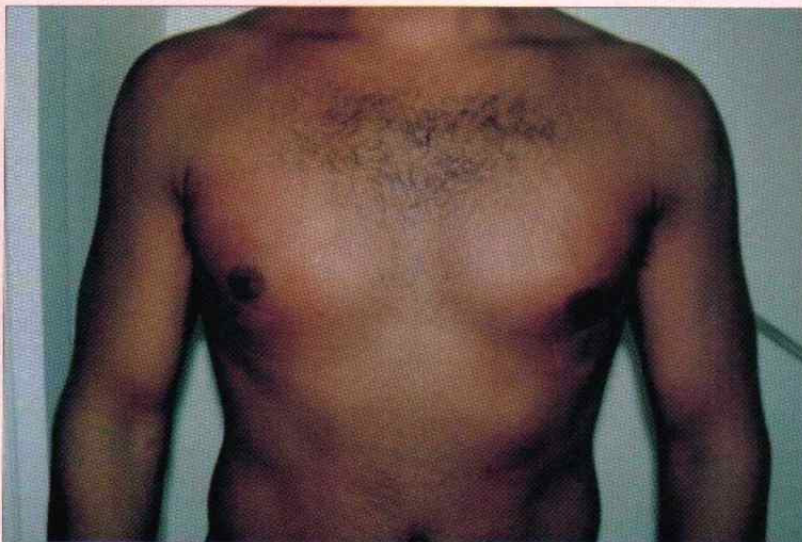
56-11



56-12

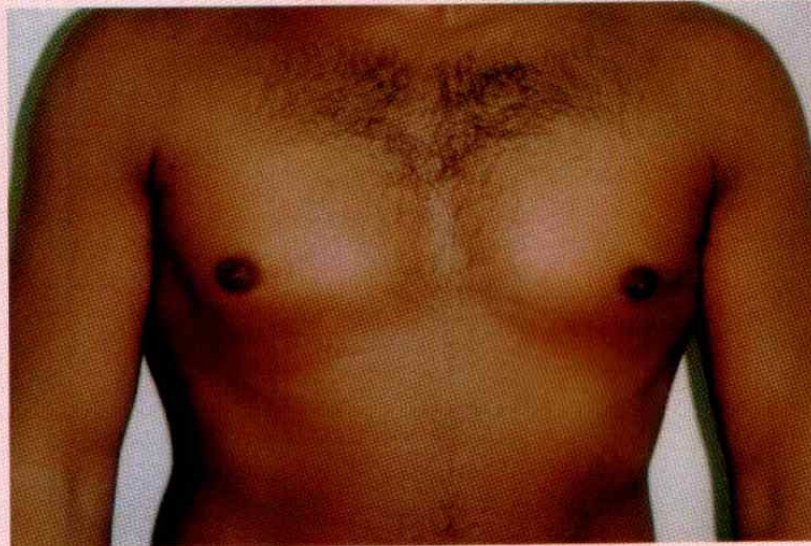
Fig. 56-11 – View of the scar after six months.

Fig. 56-12 – Preoperative view.



56-13

Fig. 56-13 – View of patient 24 hours after surgery.



56-14

Fig. 56-14 – Postoperative view six months after the surgery.

References

1. SCHAVELZON, D. & BLUGERMAN, G. Gynecomastia: Reduction by adenosuction. *Int. J. Aesthet. Restor. Surg.*, 1(1):55-61, 1993.
2. SPADAFORA, A. *Cirugía de la Obesidad, Flaccidez Cutánea y Envejecimiento*. Lopez Libreros Ed., 1974.
3. PITANGUY, I. Transareolar incision for gynecomastia. *Plast. Reconstr. Surg.*, 38:414-419, 1966.
4. AIACHE, A.E. Surgical treatment of gynecomastia in the body builder. *Plast. Reconstr. Surg.*, 83:61-66, 1989.
5. COURTISS, E.H. Gynecomastia: Analysis of 159 patients and current recommendations for treatment. *Plast. Reconstr. Surg.*, 79:740-750, 1987.
6. WOOD, W.G. Endoscopic peri-cutaneous KTP laser subcutaneous mastectomy for gynecomastia. *Plastic. Surg. Forum.*, 16:89-91, 1993.
7. BLUGERMAN, G. et al. Laserlipolysis. *Annals of the World Congress of Liposuction. American Academy of Cosmetic Surgery*, Dearborn, MI, 2000.
8. BLUGERMAN, G. et al. *International journal of cosmetic surgery and aesthetic dermatology* volume 4, number 3, 2002:233-238.
9. BLUGERMAN, G. and SCHAVELZON, D. Abdominoplasty. In: HANKE, C.W. (ed.) *Tumescent Local Anesthesia*. Springer-Verlag, 102-105, 2001.
10. ERSEK, R. et al. Gynecomastia: A clinical review. *Aesth. Surg. J.*, 20(5):381-386, 2000.

■ A qualidade das imagens deste capítulo é de total responsabilidade de seu(s) respectivo(s) autor(es).