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Gynaecomastia: Combined Liposuction and Postoperative Massage

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ABSTRACT

Background: Gynaecomastia is a relatively common condition. There are several potential causes of gynaecomastia. Regarding the surgical treatment, a large number of techniques are available for surgical correction of gynaecomastia; non scarring sparing methods are preferred. The aim of this work is to treat the fatty gynaecomastia Simon grade one and two by minimally invasive therapy, combining the liposuction technique with the postoperative massaging.

Patients and Methods: This study included thirty patients of fatty gynaecomastia Simon grade one and two, who were treated by combining the liposuction technique with the postoperative massaging during the period between March 2003 to March 2004, then follow up was continued for about 6-12 months.

Results: This combined regimen of liposuction and post-operative massage as method for treatment of the fatty gynae-comastia; Simon grade one and two; can give results superior aesthetically to liposuction alone.

Conclusion: This regimen is proved to be safe and effective for treatment of the fatty gynaecomastia; Simon grade one and two; and even it can replace the open surgical techniques (e.g. periareolar excision of the gland and extra-skin excision) to remove extra skin in Simon grade two B with all the advantages of the minimally invasive surgery. As it appears that the postoperative massaging helps the postoperative skin elasticity and reshaping of the male breast, without exposing the patient to risks of the open surgery and its possible complications.

INTRODUCTION

The term gynaecomastia comes from Greek word gyne, meaning "woman" and mastos meaning breast. In practical terms, this means abnormally large breasts of men. This benign enlargement of male breast has a prevalence of 38% in young patients **[1]**.

Gynaecomastia is a relatively common condition in adolescent boys, and 90% of the symptoms disappear in a matter of months, or, as adolescence wanes, a few years later. But the remaining 10% are burdened with a social handicap that causes a deep and complex shame, and puts the relationship of the patient with the surrounding community at risk **[1]**.

The condition may be caused by an increase in the effective oestrogen-testosterone ratio, which can be either physiological or pathological. There are several potential causes of gynaecomastia, including; puberty, steroid abuse (bitch tits), obesity, marijuana use (this is in question), tumors, genetic disorders, chronic liver diseases, side effect of many medications, castration, klinefelter syndrome, Gilbert syndrome and aging **[2]**. In case of obesity, weight loss can alter the gynaecomastic condition, but for many it will not eliminate it. For all other causes, surgery is the only known physical remedy. Once the physical encumbrance is lifted, the psychological scars still need to be addressed.

The options of treatment are medical therapy or surgical treatment, many techniques are available for surgical correction of gynaecomastia; non scarring sparing methods are preferred **[3]**.

The minimally invasive therapy by using liposuction for the treatment of the fatty gynaecomastia, particularly gynaecomastia Simon grade one and two (Table 1), is much preferred as the males usually are more conscious about scarring in the chest area, in addition avoiding of the several side effects of open surgery as wound infection, long recovery period, ischaemia of nipple and areola complex etc. **[4]**.

Table (1): A classification described by Simon in 1973 groups the patients into categories according to the size of the gynaecomastia **[5]**.

Grade 1	Is minor but visible breast enlargement without skin redundancy
Grade 2A	Is moderate breast enlargement without skin redundancy
Grade 2B	Is moderate breast enlargement with minor skin redundancy
Grade 3	Is gross breast enlargement with skin redunancy that simulates a pendulous female breast

Massaging the skin in general either manually or by computerized machines, is very helpful for the enhancement of the skin blood supply and hence the elasticity and power of contraction following its expansion, even for a long time [6].

Objective:

The aim of this work is to treat the fatty gynaecomastia Simon grade one and two by minimally invasive therapy, combining the liposuction technique with the postoperative massaging, to help the postoperative skin elasticity and reshaping of the male breast, without exposing the patient to risks of the open surgery and its possible complications.

PATIENTS AND METHODS

Thirty patients of fatty gynaecomastia Simon grade one and two were operated upon between March 2003 to March 2004 in the Department of Surgery, Faculty of Medicine, Cairo University and International Aesthetic Medical Centre, Dubai, UAE. Ages of the patients ranged between 20 years and 41 years (mean age = 26.9 years). 9 cases were Simon grade one and 21 cases were Simon grade two, of fatty gynaecomastia.

Patient evaluation was done by; full medical history of the patient, routine laboratory tests; including CBC, AST, ALT, creatinine, fasting blood sugar, prothrombin time and concentration, HIV and HBsAG.

All the patients were done under local anesthesia and sedation, using the tumescent technique in liposuction, by infiltration of fluid mixture consisting of each 500cc ringers lactate added to it 0.5mg adrenaline and 12.5cc of xylocaine 2%. The site of opening for liposuction was about 4mm size, at the junction of anterior axillary line and the infra-mammary line.

Marking was done preoperatively including the areas of each breast, which extend from the midline medially, 2nd intercostals space superiorly, mid-axillary line laterally, and infra-mammary line inferiorly. Infiltration cannula was used for infiltration, and liposuction was done using three sizes of liposuction cannulae sequentially 5, 4 and 3mm in diameter. All cannulae were blunt tip and three holes design.

Prophylactic dose of antibiotic was given two hours preoperatively, in the form of one gram 3rd generation cephalosporin intravenous. Analgesics and non-steroidal anti-inflammatory medications were prescribed in the 48 hours postoperatively.

Compression was done immediately postoperative, using compression garment (male vest), and the compression continued for 6 weeks postoperatively. All patients were discharged on the same day of the procedure and followed up at regular intervals including, one week postoperatively, then 2 weeks, one months, 3 months and 6 months. The postoperative massage was started routinely after 2 weeks post operatively, either manually (mechanical massage) which was advised to be every other day, or by computerized machine (endermologie LPG) twice weekly for 3 months.

RESULTS

Overall, 30 patients underwent surgery for correction of gynaecomastia by conventional liposuction and post operative massage, over the 12 months period. Their ages ranged from 20 years to 41 years (mean = 26.9 years). All cases had bilateral gynaecomastia with 12 cases of them had significant difference in size between both sides.

During the follow up period the encountered complications following the procedure (Table 2) were minor and required no surgical intervention there were no haematomas, seromas, infection or other early postoperative complications, part from moderate bruising in one case. Late complications included slowly resolving hypoesthesia in 2 cases, residual lumps in 2 patients (belonging to Simon grade 2 group) who had palpable irregularities in the liposuction area, which were improved com-

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[A] Fig. (1): (A&B) Preoperative photos of 38 years old patient with grade 1 fatty gynaecomastia. [B]

[C] Fig. (1): (C&D) 6 months post operative photos. [D]

[A] Fig. (2): (A&B) Preoperative photos of 28 years old patient with grade 2B fatty gynaecomastia. [B]

[C] Fig. (2): (C&D) 8 months post operative photos front and lateral views. Note that there is some excess skin but the patient was quiet satisfied. [D]

[A] Fig. (3): (A&B) Preoperative photos of 19 years old patient with grade 2A fatty gynaecomastia. [B]

[C] Fig. (3): (C&D) 4 months postoperative photos front and lateral views. [D]

[A] Fig. (4): (A&B) Preoperative photos of 21 years old patient with grade 2B fatty gynaecomastia. [B]

[C] Fig. (4): (C&D) 2 months postoperative photos front and lateral views. [D]

DISCUSSION

In the last 30 years there has been a shift in surgical treatment of gynaecomastia to a less invasive, more conservative treatment options, a number of techniques are available for the correction of gynaecomastia, no scarring sparring methods are always preferred, and the minimally invasive surgery as liposuction became the routine treatment of the indicated cases, regarding the aesthetic results and avoidance of the complications of the open surgery **[3]**.

Enhancement of the results of liposuction, especially in gynaecomastia Simon grade two with extra skin, is possible with the aid of using massage as skin shrinkage is greater in young patients (note Fig. 4 although it is grade 2B, 4 months postoperative there was no excess skin), different types of mechanical massage can be used as manual, and computerized. It was proved that the postoperative massage can hasten the resolution of oedema and fascitis that may happen and allow for skin shrinkage. As this kind of movements happen with the massage is increasing the blood supply to the skin and hence the elasticity of the skin is increasing, plus aiding resolution of the swelling and minor irregularities that may follow liposuction **[7,8]**.

General complications from liposuction of the male breast are rare, and identical to that from liposuction of any aesthetic unit of the body **[9]**.

Therefore, combining the liposuction with early postoperative massage can be the ideal treatment of fatty gynaecomastia including Simon grade two, replacing surgery with all its complications specially scarring which is unacceptable by the patients and getting all advantages of the minimally invasive surgery as the rapid recovery, short hospital stay, no scarring, good rapid aesthetic results and rare complications.

Conclusion:

This combined regimen of liposuction and postoperative massage as method for treatment of the fatty gynaecomastia; Simon grade one and two; can give results superior aesthetically to liposuction alone and also replacing the open surgical techniques to remove extra skin in Simon grade two B and gives all advantages of the minimally invasive surgery.

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