

12 LIPOSUCTION VS SURGICAL EXCISION OF GYNECOMASTIA Dr Ravi satasia, Dr Sanket katara

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ABSTRACT

Background:Gynaecomastia is usually treated with liposuction or liposuction with excision of the glandular tissue. The type of surgery chosen depends on the grade of the condition.

Objective: In this study, we aim to discuss the outcomes of the surgical management of the gynaecomastia and assess the morbidity and complication rates associated with the procedure to determine whether certain surgical techniques produce better outcomes.

Materials and Methods: The technique complies with all recommended protocols for different grades of gynaecomastia. It uses liposuction, gland excision, or both, leaving only minimal post-operative scars.

Conclusion: The study has found that moderate sized gynaecomastia whether true or pseudo gynaecomastia with mild to moderate breast redundancy can be managed easily and effectively by liposuction alone or combined with glandular resection while the conventional infraareolar subcutaneous mastectomy still gives satisfactory results and with no need to remove extra skin. On the other hand, large gynaecomastia with severe breast redundancy can be treated effectively by the inferior pedicle technique without vertical scar.

Keywords: liposuction; gynaecomastia surgery; gynaecomastia

INTRODUCTION

Gynecomastia is a common problem in the male population, particularly in young adults, with a reported prevalence of up to 36%. (Nuttal FQ., 1979). The term refers to a benign female-like enlargement of the male breast resulting from an increase in ductal tissue, stroma and/or fat. Enlarged breasts can cause anxiety, self-consciousness and embarrassment, functional problems and psychosocial discomfort and fear of malignancy. It is not surprising, therefore, that gynecomastia is the most common cause for seeking medical advice for a breast condition in men. The two treatment options are medical therapy and surgical removal. Medical therapy is probably most effective during the active proliferative phase of the condition. If a trial of medical treatment is unsuccessful or the gynecomastia has been present for several years, then surgical treatment is likely to be required. Surgical options for gynecomastia include liposuction, open resection and resection with skin reduction. Outcome studies of surgical correction have generally shown high levels of satisfaction. (Wiesman IM, et al., 2004). Surgery is, therefore, not a decision to be taken without careful patient assessment. Various techniques have been described over the years, but no technique has yet gained universal acceptance. Liposuction with or without gland excision is the commonly used technique among plastic surgeons. (Boljanovic S., et al., 2003). The procedure chosen is determined by the grade of the condition.

(WiesmanIM,etal.,2004) Conventionally, liposuction in gynaecomastia is performed using one or two small incisions on each side of the chest (Lanitis S, et al., 2008). The gland is excised through a periareolar incision. (Anderson RC, et al., 2006). This is followed by the insertion of drains either through one of the liposuction entry wounds or through a separate incision. The drain site and liposuction wounds are not sutured and are left to heal secondarily, leading to visible scars [8] in the chest in addition to the periareolar wounds. But, when the liposuction is performed through incisions in the periareolar region, the fat below the areola cannot be addressed satisfactorily, which may necessitate the use of larger incisions to deliver the gland. We aimed to review all gynaecomastia patients operated on under the care of AMCMET medical college and Hospital within 1 years. We aimed to assess the morbidity and complication rates associated with the procedure and to determine whether certain surgical techniques produced better outcomes.

MATERIALS AND METHODS

Technique

The markings are performed in an upright posture and general anaesthesia is administered. The patient is positioned supine on the table. The breast is infiltrated with 200-250 ml of tumescent fluid (1 L Ringer lactate with 20 ml of 2% lignocaine, 20ml sodium bicarbonate, 1 ml of 1:1000 adrenaline). The initial incision for liposuction is a 7-mm stab made at the 6'o clock position at the skin-areola junction of the nipple-areola complex. Pre-tunneling before liposuction is carried out using a liposuction cannula through this incision. A 3 mm-diameter liposuction cannula with the Mercedes Benz tip is inserted and liposuction of the ipsilateral breast is completed. The same procedure is repeated on the opposite breast as well. All liposuctions were carried out using a power-assisted device. At the end of this step of liposuction, the sub-areolar part of both the breasts remains unaddressed. A 4-mm-diameter liposuction cannula is inserted through the same incisions and liposuction of the sub-areolar regions of the opposite breasts is also performed after creating one tunnel across the chest. Then, through another tunnel, the inframammary area is again sucked. The liposuction is done in such a way that there is a 5-mm-thick layer of fat that is left underneath the skin at all the regions. The volume of fat aspirated from each side is noted. In patients requiring a glandular excision, the stab incision is extended for 2 mm on either side into a periareolar incision and the glandular elements are removed surgically. Post-operatively, a suction drain is inserted and brought out through the same incision. A mattress suture is placed and left loose in the part of the incision through which the drain is passed, to be tied later after removal of the drain. This was followed by pressure vest from the immediate post-operative period, the dressings were changed on the first or second post-operative day and the drains were removed when the drain volume was <30ml. The patients were discharged on the same day of the procedure. This was followed by regular clinical follow-up at 3 months to 6 month.

The study was conducted at AMCMET medical college and Hospital during the period from January 2017 to February 2018. The total number of subjects enrolled in the study was 30 patient. All the patients underwent clinical and radiological assessment to rule out differential diagnosis. All the cases included in the study were of idiopathic etiology. The patients belonged to the age group ranging from 22 years to 50 years (mean age, 33 years). All the subjects sought medical help for cosmetic reasons fear and anxiety. Patients were classified as having neither mild, moderate or gross gynaecomastia as per Simon's classification, (Simon BE, et al.,

1973) and the presence of skin excess was noted.

Operative techniques

Pre-operatively, all patients were marked in the upright sitting position. The breast tissue was infiltrated, via a single stab incision, with a solution of normal saline, 1% lignocaine and 1:1000adrenaline.All surgery was performed under general anaesthesia, and patients received one dose of intra-operative intravenous antibiotics. Following the procedure, a pressure dressing consisting of gauze was applied and held in place with microfoam tape. Patients were instructed to wear a pressure garment day and night for six weeks. The following surgical techniques were used singly or in combination.

Liposuction

Liposuction was performed following a superwet/ tumescent infiltration of the previously mentioned infiltrate. The cannula was continuously moved in fanlike long strokes, starting deep and working superficially. Special effort was made to disrupt the inframammary fold where this was well formed. The endpoint was determined by loss of tissue resistance, aspiration volume, appearance of the aspirate and treatment time.

Open excision

A semi-circular incision was made along the inferior margin of the nippleareola complex. Dissection with scissors commenced inferiorly to the border of the breast, then proceeded in a deep plane to the upper limit of the breast.Dissection was continued superiorly to the incision leaving a 1 cm disc of breast tissue on the undersurface of the areola. Subsequently, the breast tissue was excised through the semi-circular incision.

RESULTS

Thirty of patients and a total of 60 breasts were operated on during the study period. Ages ranged from 22-50 years (Mean 33 years).five patients were of grade 1.four and three patients were of 2 a and 2b grade.Grade 3s patients were 18. Twenty patients cited emotional problems as the reason for them seeking help, whereas one complained of pain and discomfort.Patients underwent either liposuction alone (10 breasts), excision alone (36breasts) or both excision and liposuction (14 breasts).Minor complications included seroma (2 patients), changes in sensation (2 patients) The only acute major complication encountered were haematomas not requiring evacuation in theatre (2 patients). There were two cases of wound infection documented within our patient group. Although one patient was noted to have skin excess post-operatively that may have benefited from revision surgery, this was not possible due to hypertrophic scarring.Patients were followed up for an average of 6 months . One patient did not attend again after their first post-operative appointment. The time interval between patients' operations and return of the questionnaire ranged from 6-8 months . Analysis revealed a general trend showing increased satisfaction rates as time from surgery increased.

Complication	Liposuction	Excision	Liposuction with excision
Hemetoma	1	0	1
Infection	0	2	0
Breast asymetry	0	1	0
Change sensation	1	0	1
Seroma	1	1	0
Painful scar	0	1	0

Total patients	3	5	2
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DISCUSSION

Surgery is the mainstay of treatment for gynaecomastia and although a wide range of surgical techniques have been described, surgeons often find it difficult to choose the technique that will achieve the best results for a given patient. Gynaecomastia has peaks in incidence within three age groups. This may relate to the fact that the most common trigger for surgery was emotional distress, and middle-aged/older men may be less affected by this stimulus compared to the younger age group. Studies have demonstrated overall complication rates for gynaecomastia surgery as being approximately 15.5%, with the highest rate in grade I patients

(21.6%). (Colombo-Benkmann M, et al., 1999) Our overall complication rate was slightly higher than this (22.6%). However, these were mainly minor acute complications that did not significantly affect the final result. There were no cases of nipple-areola complex necrosis or areolar tethering. Complication rates between different surgical techniques varied significantly. Overall complication rates among the excision only group was the highest (35.76%) followed by the liposuction only group (20.87%) and the liposuction and excision group (11.66%). Conventional liposuction combined with open excision was first described as a treatment for gynaecomastia by Teimourian [8] and Perlman in 1983, and has become a widely accepted method, because of the frequent difficulty of removing breast parenchyma by suction alone. In addition, liposuction alone often requires specialised cutting cannulas, which are traumatic and increase the risk of damage to blood vessels and nerves. Pre-tunnelling and suction achieved with liposuction prior to open excision helps to taper the peripheral contour, define the glandular tissue and make the excision easier. In our series, grade III patients experienced the highest complication rate (39.92%), followed by grade II (27.18%) and grade I (23.72%). Previous studies have quoted overall revision surgery rates as 17.4%, with the highest rate in grade II patients (34.8%). (Colombo-Benkmann M, et al. 1999) None of the patients in our series underwent revision surgery. Sophocles et al. 2008, found that the weight of the specimen excised was not a significant predictor of minor or acute major complications. This is also confirmed by our series of patients. It is not possible to examine whether any factors contribute to a poor cosmetic result within our series as only one patient had an unsatisfactory result. Outcome studies of gynaecomastia correction have shown varying levels of satisfaction with the results of surgery with Fruhstorfer et al. (Fruhstorfer BH, et al., 2003) showing high levels of satisfaction while Ridha et al., (Ridha H

, et al. 2009) showed much lower levels. Our series demonstrated generally high satisfaction rates amongst both patients and surgeon. Eleven patients (45.8%) had their outcome classified as 'excellent' at their second follow up appointment by the operating surgeon, 16 patients (62.64%) as 'good', 1 (4.08%) as 'satisfactory' and 1 (4.08%) as 'poor'. Patients too were generally 'satisfied' with their outcome with regards comfort and appearance. Three patients in the liposuction only group were left with a small residual lump. Despite the contour of their chests being satisfactory, they were not satisfied with the result. In contrast, patients who underwent excision were generally very satisfied, returning the highest overall scores for satisfaction, chest shape and self-confidence levels. The peri-areolar scar was well accepted and faded with time. Therefore, during correction of gynaecomastia with liposuction, the threshold for conversion to an open procedure should be low because it is not associated with a significant disadvantage to the patient, but rather leads to a high degree of satisfaction.

CONCLUSION

Gynaecomastia is a complex condition, which poses a significant challenge to the plastic surgeon. The initial treatment should aim to correct any underlying abnormality or discontinuing any medications that may be contributing to the condition. Although the efficacy of medical treatment has not yet been well established, conservative measures should be considered prior to

surgery(TrellesMA,etal., 2013)

Gynaecomastia present for more than two years is unlikely to regress spontaneously or with medical treatment due to the tissue becoming irreversibly fibrotic. (Wiesman IM, etal.,2004). In these cases, surgery remains the mainstay of treatment. Despite many operative techniques being described, the principal aims of surgery remain to correct the deformity, restore normal body contour and image, maintain the viability of the nipple-areola complex and avoid excessive scarring(Teimourian B,etal., 1983).

The surgeon needs to retain flexibility, because often a final assessment of consistency, skin excess and quality is possible only during surgery. Liposuction should always be used in diffuse or large breasts. Following liposuction, the consistency of the breast should be examined, and open excision is performed if a residual lump or firmness is present. Following liposuction and open excision, the skin excess settles to some degree depending on the skin quality. Skin excision is indicated if there is still noticeable skin excess.(Laituri CA, etal., 2010). The choice of concentric or Lejourmastopexy depends on the amount of skin excess. The larger the skin excess, the more likely it is that a Lejour patternskin resection will be needed.Although there are significant possible complications associated with surgery, our case series demonstrates that with careful planning and patient

selection, outcomes of operative correction can be favourable and yield high levels of satisfaction from both patient and surgeon.

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