

Single Stage Correction of Gynecomastia: Liposuction & Glandular Excision

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ABSTRACT

Objective: To determine the frequency of complications after single stage correction of gynecomastia, along with level of satisfaction in patients and surgeon 4 weeks post operatively

Study Design: Prospective cohort study.

Place and Duration of Study: This study was conducted at the Department of Plastic Surgery, Liaquat National Hospital, Karachi from April 2014 to March 2017.

Material and Methods: Informed consent was taken from all patients enrolled. The surgical technique consisted of liposuction and excision of the glandular tissue by minimal Periareolar incision. Skin excision was done where needed. Post operatively, patients were followed for complication rate and 4 weeks postoperatively both patient and surgeon were asked to grade their level of satisfaction.

Results: 26 patients were enrolled and analyzed. Over all, complication rate was 15% (4/26). One developed hematoma for which he required re-operation, one had irregularities and two had flattening of chest. Patient Satisfaction was 85% & Surgeons Satisfaction was 87%.

Conclusion: Liposuction along with glandular & skin excision decreases post-op nipple projection and have aesthetically pleasing results with a low rate of complications and excellent patient & surgeon's satisfaction.

Key Words: Gynecomastia, suction-assisted liposuction, periareolar incision, satisfaction rate.

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INTRODUCTION

Gynecomastia (GM) is a benign condition of the male breast in which there is enlargement of mammary gland¹. GM is classified into 4 grades of increasing severity. It can be asymmetrical and often bilateral. Patients usually present because of cosmetic and psychological problems². Global data showed a 32-36% prevalence worldwide³. Treatment of gynecomastia varied from direct surgical excision to other techniques mainly liposuction or combination of both. Skin excision is done according to the grade. Procedures like ultrasound-assisted liposuction, mammotome mastectomy arthroscopic shaver, or endoscopic removal were introduced to decrease the morbidity of conventional excision but these procedures don't work alone for correction of all types of gynecomastia^{4,5}. The goal of surgical treatment is to achieve a pleasant shape of male breast and chest wall with acceptable scars, no nipple projection and skin irregularities, preservation of nipple and areola sensation and acceptable complication rate⁶.

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We observed that after liposuction alone there was still some degree of nipple projection [fig: 1A], which needed to be addressed. In this study, we will review our personal experience of using a combination of liposuction and a subsequent surgical excision through a peri-areolar incision in a single stage along with skin excision if needed.

To date, no studies have been performed in Pakistan analyzing the patient and surgeons satisfaction after single stage correction of gynecomastia. Our study also aims to evaluate patient & surgeons satisfaction, furthermore assessing our complications frequency.

MATERIALS AND METHODS

It is a prospective cohort study conducted at the Department of Plastic Surgery, Liaquat national hospital, Karachi from April 2014 to March 2017.

Inclusion Criteria:

1. 18 years of age or above
2. Gynecomastia regardless of any cause
3. Agrees to participate

Exclusion Criteria:

1. Age below 18years
2. Not willing to participate

Informed consent was taken from all patients. Post procedure all patients were discharged the next day and were followed in outpatient clinic weekly for one month to observe the complication rate and to take measures which are required accordingly. At 4weeks chest belts were removed and both patient and surgeon

were asked to grade their level of satisfaction. All data entered in SPSS version 21 and results were analyzed. Descriptive analysis was used using percentages for quantitative variables. For continuous data, mean with SD was used.

- **Assessment parameters:** complications like seroma, hematoma, abscess, partial nipple necrosis, irregularities, asymmetry, flattening of chest & need for re-operation was included. Operating surgeon satisfaction & patients satisfaction was scored from 1 to 5 based on a review of comments during the post-operative visit and was rated according to the following scale 5: excellent, 4: good, 3: fair, 2 and below: poor.
- **Surgical technique:** pre-op marking was done in sitting position. Under general anesthesia, both breasts were infiltrated by tumescent technique (1 liter n/s + 1 ampule adrenaline + 2 ampules of plain 2% Xylocaine + ½ kenacort). Chest incision is given 6cm below inframammary line less than a cm and liposuction was done. A peri-areolar incision was given and glandular tissue was excised (fig:1 B). Skin excision was done if needed. Hemostasis secured, wound closed & chest belt placed.

Postoperative care & follow-up: early mobilization was done. Watched for any collection, hematoma or nipple necrosis. Patient was discharged on 1st post-operative day and was called for follow-up weekly for one month and then monthly as needed. Chest belt was in place for 4 weeks.

RESULTS

Total 26 patients underwent surgical treatment for gynecomastia. All were bilateral (52 breasts). Mean age was 32 ± 6.776 years (range, 18 to 48 years) & mean follow-up was 2 ± 1.356 months (range 1 to 6 months). All patients underwent liposuction & glandular excision only one patient needed skin excision. Post procedure one patient developed hematoma for which he required re-operation, one had contour irregularities and two had flattening of chest. Over all complication rate was 15% (4/26) as given in Table No. 1.

Table No. 1: Complications observed postoperatively after single stage correction of gynecomastia

Complications	Number of patients (N=26)
Seroma	0
Hematoma & Reoperation	1(4%)
Contour Irregularities	1(4%)
Flattening of the chest	2(8%)
Abscess	0
Partial nipple necrosis	0
Asymmetry	0

Over all 85% (22/26) of patients were happy (rated excellent & good) with the final outcome. 23% (6/26) rated as excellent, 62% (16/26) rated as good only 15%

(4/26) were not happy with their results & rated fair. None of patients rated poor (Fig# 2).

Over all of 87% (23/26) patients, surgeon was happy with the final outcome. He rated 30% (8/26) as excellent, 57% (15/26) as good & 13% (3/26) as fair (Fig# 2).



Fig No.1: A) Post-liposuction still has some degree of nipple projection.



Fig No.1: B) Glandular tissue excision by periareolar incision gives better

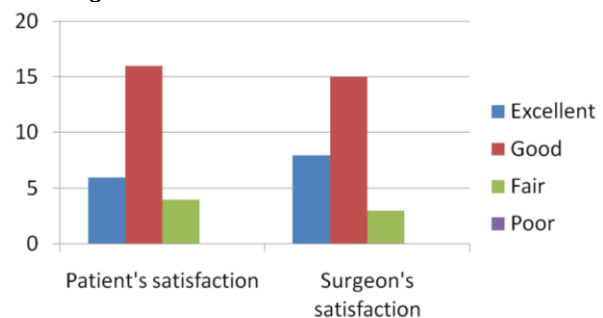


Figure No. 2: Patient's & Surgeon's satisfaction

DISCUSSION

Gynecomastia is a common breast lesion in males, accounting for up to 91.9% of male breast disorders.⁷ Causes of gynecomastia vary, but most common are either idiopathic or persistent pubertal gynecomastia without a significant secondary cause⁸. There are several case series in which no cause could be identified in majority of the patients.⁹

Gynecomastia is worrisome for all age groups. Adolescent usually present because of cosmetic and psychological problems² as it is a source of embarrassment. Elderly are usually concern about the possibility of cancer.

Many surgical techniques are available for the treatment of gynecomastia. However, in literature, a large number of surgical procedures have been described and there is no generally accepted satisfactory approach¹⁰

The combined use of liposuction with open excision which we have used in our study was first introduced by Teimourian and Perlman.¹¹ Later Hammond and his colleagues described a combined technique using ultrasound assisted liposuction combined with surgical excision in 2005¹², & in 2007 by a group from the Netherlands, where they used suction assisted liposuction combined with surgical excision¹³.

In this study, suction-assisted liposuction with glandular excision was used in all grades of gynecomastia. Skin excision was done only in one patient as most of our patients were young mean age was 32 ± 6.776 years (range 18 to 48 years) & there skin has amazing capability to contract after procedure⁵. Complication rate in our study was 15% (4/26). Most common was flattening of chest, occurred in two patients. One patient developed hematoma for which he required re-operation & one had contour irregularities. Similar study reported there complication rate to be 0% (0/32) by Yang HY et al in 2007¹⁴. In 2008 Lius et al reported there complication rate to be 12.5% (5/40) which included 2 hematoma & 3 peri-areolar necrosis¹⁵. El-Sabbaghet al reported in 2016 a similar study and there complication rate is 36% (5/14) included 3 seroma & 2 peri-areolar skin necrosis¹⁶. On comparing to similar work done worldwide, our complication rate was almost in the same range that shows our technique is according to standards worldwide.

Post operatively no drains were used in our patients as drains causes discomfort to the patient, drain sites can leave conspicuous scars and may represent as potential sources of tract formation or infection. Traditionally it was believe that it is use to remove undesirable postoperative fluid & minimize tissue dead space, but Keskin M et al reported in a study that when intraoperative tumescent fluid and a postoperative compression garment are used, omitting the placement of closed-suction drainage increases patient comfort

without the risk of increasing complications from gynecomastia surgery.¹⁷ In a study by El-Sabbagh et al¹⁶ drains were routinely used and patients were allowed to discharge on 1st day with drains, but there is no significant difference in complication rate.

Patient satisfaction is the key determinant of success of any cosmetic procedure. Ridha et al¹⁸ concluded that men with gynecomastia constitute a specific group of patients, in which a measure of treatment success should be patient's satisfaction. We also measured our treatment success by patient satisfaction which is 85% in our study. Md. Sohaib Akhtaret al.¹⁹ reported their patient's satisfaction rate to be 86% & Taheri AR et al²⁰ reported a mean patient satisfaction score of 8.1 ± 1.396 with the range of 5-10 from total 10 score that is equal to 81%. This shows treatment of gynecomastia regardless of any surgical technique used is beneficial for patient's psychological outcome.

Surgeon's satisfaction rate in our study is 87%. Taheri AR et al²⁰ reported 8.36 (83.6%) total mean of physician satisfaction score. Surgeon himself rated the procedure which is one of the limitations of both the studies.

Over all our study shows promising results for aesthetic and psychological uplift of the patient but as it has limited no of patients and no control group which should be considered in future.

CONCLUSION

Gynecomastia of all grades was corrected by the same approach. Skin excision was added to a patient who had skin excess. There is low complication rate and excellent patient & surgeon's satisfaction in our study. We recommend that Liposuction with glandular & skin excision can safely be done in the same sitting with aesthetically pleasing results.

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Author's Contribution:

Concept & Design of Study:	Mirza Shehab Afzal Beg
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Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES

1. Guenther D, Rohrich RJ, et al. The Art of Aesthetic Surgery: Principles and Techniques 2nd ed. F N, editor. St Louis: Quality Medical; 2011.
2. Rosen H, Webb ML, DiVasta AD, Greene AK, Weldon CB, Kozakewich H, et al. Adolescent

- gynecomastia: not only an obesity issue. *Ann Plastic Surg* 2010;64(5):688-90.
3. Petty PM, Solomon M, Buchel EW, Tran NV. Gynecomastia: evolving paradigm of management and comparison of techniques. *Plastic Reconstruct Surg* 2010;125(5):1301-8.
 4. Kasielska A, Antoszewski B. Surgical management of gynecomastia: an outcome analysis. *Ann Plastic Surg* 2013;71(5):471-5.
 5. Hammond DC. Surgical correction of gynecomastia. *Plastic Reconstruct Surg* 2009;124(1):61e-8e.
 6. Li CC, Fu JP, Chang SC, Chen TM, Chen SG. Surgical treatment of gynecomastia: complications and outcomes. *Ann Plastic Surg* 2012;69(5):510-5.
 7. Jatav J, Gaur R, Pandit V, Jain B. Cytological evaluation of male breast lesions in greater gwailor: a five year retrospective study. *Jebmhcom* 2015;729.
 8. Longheu A, Medas F, Corrias F, Farris S, Tatti A, Pisano G, et al. Surgical management of gynecomastia: experience of a general surgery center. *Il Giornale di Chirurgia* 2016;37(4):150.
 9. Einav□Bachar R, Phillip M, Aurbach□Klipper Y, Lazar L. Prepubertal gynaecomastia: aetiology, course and outcome. *Clin Endocrinol* 2004;61(1): 55-60.
 10. Fruhstorfer BH, Malata CM. A systematic approach to the surgical treatment of gynaecomastia. *Br J Plastic Surg* 2003;56(3): 237-46.
 11. Teimourian B, Perlman R. Surgery for gynecomastia. *Aesthetic Plastic Surg* 1983;7(3): 155-7.
 12. Hammond DC, Arnold JF, Simon AM, Capraro PA. Combined use of ultrasonic liposuction with the pull-through technique for the treatment of gynecomastia. *Plastic and Reconstructive Surgery* 2003;112(3):891-5.
 13. Esme DL, Beekman WH, Hage JJ, Nipshagen MD. Combined use of ultrasonic-assisted liposuction and semicircular periareolar incision for the treatment of gynecomastia. *Ann Plastic Surg* 2007;59(6):629-34.
 14. Yang HY, Xu J, Yan XQ, You L. A modified technique of liposuction with excision for gynecomastia. *Zhonghua yi xue za zhi* 2007; 87(43):3082-4.
 15. Liu S, Kuang R, Chen Z, Li H, Zhang W, Wang Z, et al. Treatment of gynecomastia by a combined method of liposuction and semicircular periareolar incision glandular organ partial resection. *Zhongguo xiu fu chong jian wai ke za zhi= Zhongguo xiufu chongjian waikes zazhi= Chinese J Reparative Reconstruct Surg* 2008;22(12):1418-20.
 16. El-Sabbagh AH. Combined approach for gynecomastia. *GMS Interdisciplinary plastic and reconstructive surgery DGPW*. 2016;5.
 17. Keskin M, Sutcu M, Cigsar B, Karacaoglan N. Necessity of suction drains in gynecomastia surgery. *Aesthetic Surg J* 2014;34(4):538-44.
 18. Ridha H, Colville RJI, Vesely MJJ. How happy are patients with their gynaecomastia reduction surgery? *J Plastic Reconstruct Aesthetic Surg* 2009;62(11):1473-8.
 19. Akhtar S, Khan AH, Basari R, Khurram MF, Ahmad I, Azmi S. Role of liposuction combined with subcutaneous mastectomy in the surgical treatment of gynecomastia. *J Basic Clin Reproduct Sci* 2014;3(1):32-7.
 20. Taheri AR, Farahvash MR, Fathi HR, Ghanbarzadeh K, Faridniya B. The Satisfaction Rate among Patients and Surgeons after Periareolar Surgical Approach to Gynecomastia along with Liposuction. *World J Plastic Surg* 2016;5(3):287.