



ISSN: 0976-3031

Available Online at <http://www.recentscientific.com>

CODEN: IJRSFP (USA)

*International Journal of Recent Scientific Research*  
Vol. 10, Issue, 06(G), pp. 33160-33163, June, 2019

**International Journal of  
Recent Scientific  
Research**

DOI: 10.24327/IJRSR

## Research Article

### GYNECOMASTIA: OUR EXPERIENCE AT TERTIARY CENTRE

Dr. Nilesh Shende<sup>1\*</sup>, Dr. Vinita Puri<sup>2</sup>, Dr. Vivek Gupta<sup>3</sup> and Dr. Ujwal Chirde<sup>4</sup>

<sup>1</sup>Assistant Professor, Seth GS Medical College & KEM Hospital, Parel, Mumbai

<sup>2</sup>Professor & Head, Seth GS Medical College & KEM Hospital, Parel, Mumbai

<sup>3</sup>Senior resident, Seth GS Medical College & KEM Hospital, Parel, Mumbai

<sup>4</sup>Senior resident, Seth GS Medical College & KEM Hospital, Parel, Mumbai

DOI: <http://dx.doi.org/10.24327/ijrsr.2019.1006.3618>

#### ARTICLE INFO

##### Article History:

Received 12<sup>th</sup> March, 2019

Received in revised form 23<sup>rd</sup>

April, 2019

Accepted 7<sup>th</sup> May, 2019

Published online 28<sup>th</sup> June, 2019

##### Key Words:

Gynecomastia, Tumescent liposuction,  
Gland excision, Peri-areolar incision

#### ABSTRACT

Gynecomastia is a benign condition characterized by enlargement of the male breast due to proliferation of the glandular tissue and local fat deposition. It can be physically uncomfortable, psychologically distressing and may have a negative impact on self-confidence and body image. Various modalities of treatment for this condition have been mentioned in literature. Aim of our study is to evaluate our surgical strategy used to correct gynecomastia using tumescent liposuction and to do surgical excision of the gland when the gland was palpable.

**Methods:** The case record forms of 35 patients, who underwent surgical treatment of gynecomastia by our technique between April 2014 and January 2018 at our centre were analysed retrospectively. Data obtained from admission notes, operative notes, discharge summary, out-patient department follow up sheet.

**Result:** Total of thirty five patients were included in the study. 33 were bilateral gynecomastia and 2 were unilateral. Minimum age of the patient was 19 years and oldest was of 48 years, mean age being 25 years. Commonest etiology was idiopathic within 16 patients, 10 patients had persistent pubertal gynecomastia, 5 patients had history of drug induced gynecomastia. We encountered complications in 4 breasts (5.9%), one (1.47%) showing hematoma formation, and two (3%) had buttonholing of areola and one (1.47%) had partial necrosis of nipple which subsequently got resolved.

**Conclusions:** The surgical strategy of excision of the gland using peri-areolar incision when gland is palpable even after tumescent liposuction yields predictable results in terms of low complications and minimal recurrence.

Copyright © Dr. Nilesh Shende *et al*, 2019, this is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

#### INTRODUCTION

Gynecomastia is a benign condition characterized by enlargement of the male breast, which is due to proliferation of the glandular tissue and local fat deposition. It can be physically uncomfortable, psychologically distressing and may have a negative impact on self-confidence and body image. Pseudogynecomastia is common in obese men, and consists of lipomastia alone, without glandular proliferation. Male breast tissue proliferation can occur at all ages and may be unilateral or bilateral.<sup>[1]</sup>Physiological gynecomastia is seen in newborn, adolescent and elderly age due to hormonal imbalance. The other causes are use of medications like spironolactone, ketoconazole, calcium channel blockers, or marijuana, and pathological causes like cirrhosis, adrenal or testicular neoplasms, or hypogonadism.<sup>[2]</sup>Various modalities of treatment for this condition have been mentioned in literature. In this

study we evaluate our surgical strategy used to correct gynecomastia using tumescent liposuction and to do surgical excision of the gland when the gland was palpable.

##### Aims

1. To evaluate the results of our surgical strategy of tumescent liposuction with or without surgical excision of the gland
2. To study different etiologies of gynecomastia.
3. To analyse various postoperative complications.

#### MATERIALS AND METHODS

Permission for study was received from the Ethics committee of our institute with project number of (EC/OA-63/2018). The case record forms of 35 patients, who underwent surgical treatment of gynecomastia between April 2014 and January 2018 at our centre were analysed retrospectively. Data obtained

\*Corresponding author: Dr Nilesh Shende

Assistant Professor, Seth GS Medical College & KEM Hospital, Parel, Mumbai

from admission notes, operative notes, discharge summary and out-patient department follow up sheet was entered into a pre designed case record form. Prior to surgery, we took accurate medical history of patients to identify risk factors for gynecomastia and we performed a full physical examination. Endocrinological assessment was performed to exclude underlying endocrinopathies, metabolic disorders, and testicular cancer. Surgical strategy used to correct gynecomastia was to do tumescent liposuction and to do surgical excision of the gland when the gland was palpable. Patients were followed up in the out-patient department on weekly basis for a month to watch for complications like necrosis and inversion of nipple and asked to follow up monthly for six months.

### Surgical technique

Our surgical strategy used to correct gynecomastia was to do tumescent liposuction and to do surgical excision of the gland when the gland was palpable. Pre-operative marking (fig. 1) for liposuction for gynecomastia was done in standing position.

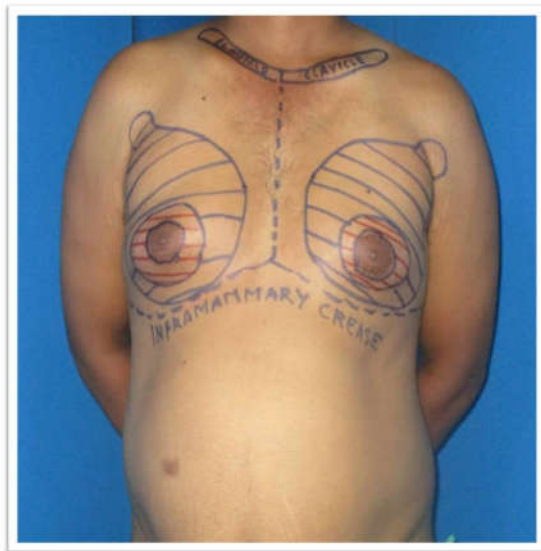


Figure 1 Pre-op marking

Subcutaneous fatty tissue of the breast was infiltrated with a solution to create tumescence (swollen and firm) and waiting period of twenty minutes was observed for it to act.<sup>[3]</sup> Solution we used consists of 1 ml epinephrine (1: 1,000) and 1,000 ml Ringer lactate. Two stab incisions per side were made by scalpel, one on lateral aspect of the inframammary fold and another at height point on anterior axillary line. Initially syringe liposuction is done to harvest adequate amount of fat to correct any contour deformities resulting after the suction liposuction which we used in two cases. Then suction liposuction of the layers was performed with a 4-mm cannula, followed by superficial or fine-contouring liposuction using a 3-mm cannula. If necessary, liposuction was performed holding the gland, also the inframammary fold was broken by liposuction. The adequacy of liposuction was assessed by palpating chest with hands intermittently and at the end. After liposuction, the residual gland was removed through a periareolar incision between 3 and 9 clock position of the areolar circumference, while pulling the nipple-areolar complex ventrally with a double-hook retractor. The glandular tissue was excised under visual control by pull through

technique and in piece meal fashion. The retroareolar glandular tissue layer was left in place. Anchoring of NAC to wound edge was done to prevent inversion of nipple, Suture line was closed in layers using 4-0 monocryl. Sterile dressing was applied and moderate pressure was applied by elastic tape, the stab incisions at inframammary site is not closed as it allows for drainage of aspiration fluid.<sup>[4]</sup>

### RESULTS

Total of thirty five patients were operated for gynecomastia between the periods of April 2014 to January 2018. Youngest of the patient was 19 years and oldest was of 48 years, mean age being 25 years. Commonest aetiology was idiopathic in 16 patients, 10 patients had persistent pubertal gynecomastia, 5 patients had history of drug induced gynecomastia of which 3 patients were body builders taking anabolic steroids, other 4 suffered from disorder of sexual differentiation. 33 patients had bilateral gynecomastia of which 19 were grade of 2B, 9 had grade 2A. 2 patients had unilateral gynecomastia, one had right-grade 2A and other had left-grade 2A (Table 1). 5 had asymmetric type of which one was recurrent gynecomastia (only liposuction had been done previously). 11 patients underwent only liposuction, whereas 24 required both liposuction and gland excision. Average operative time in bilateral case for liposuction was 90 minutes but when combined with gland excision reached upto 150 minutes. (fig. 2-5)



Figure 2 Unilateral gynecomastia (Pre-op)



Figure 3 Unilateral gynecomastia (Post-op)



Figure 4 Bilateral gynecomastia (Pre-op)



Figure 5 Bilateral gynecomastia (Post-op)

We operated on a total of 68 breasts, We encountered complications in 4 breasts (5.9%) one (1.47%) showing hematoma formation, and two (3%) had buttonholing of areola and one (1.47%) had partial necrosis of nipple which subsequently got resolved. (Table 2)

## DISCUSSION

Gynecomastia occurs in neonatal period due to trans-placental passage of oestrogens which regresses by first year, second peak is seen during puberty (by age 17 only 10% of boys having persistent gynecomastia) and the last peak occurs between the ages of 50 and 80 years. The diagnostic criterion defined varies in different studies as a palpable mass of subareolar breast tissue measuring at least 0.5 cm, 1 cm, or 2 cm. Bannayan *et al* have described three histological types of gynecomastia: florid, fibrous, and intermediate.<sup>[5]</sup> The florid type shows ductal hyperplasia and proliferation, with loose stromal component, the fibrous type contains stromal fibrosis and fewer ducts and the intermediate type of gynecomastia presents characteristics of both. In the majority of cases, if the duration of gynecomastia is greater than one year, the fibrous type is more prevalent and irreversible, which may limit success of medical treatments.<sup>[6]</sup>

*We adopt Simons classification for its practical applicability. Simon et al described three grades of gynecomastia*

1. Grade I: Small enlargement without skin excess,
2. Grade IIa: Moderate enlargement without skin excess,
3. Grade IIb: Moderate enlargement with minor skin excess,
4. Grade III: Marked enlargement with excess skin, mimicking female breast ptosis.<sup>[7]</sup>

ifferent methods for liposuction have been described in literature ranging from simple syringe liposuction to using manual suction, ultrasound, power assisted, and lasers.<sup>[6],[8]</sup> Various port sites like inframammary, areolar, along anterior axillary line have been mentioned for liposuctioning of breast. Also there is variability in choice of incision for removal of gland and tackling of skin redundancy like trans-nipple, transareolar, concentric circles, superior peri-areolar and inferior peri-areolar.<sup>[9],[10],[11],[12]</sup> We have used two stab incisions per side, made by scalpel in the inframammary fold on lateral aspect of the inframammary fold and another at highest point on anterior axillary line and inferior peri-areolar incision for excision of gland. These incision placements for liposuction allows cross tunnelling across complete circumference of the breast. The inferior peri-aerolar incision between 3 and 9 o'clock position is easy; the glandular tissue can be excised under visual control and helps in maintaining retro-areolar tissue comfortably. We adopted pull through and piece meal excision technique of gland to avoid buttonholing of skin. The retro-areolar glandular tissue layer was left in place in order to guarantee substantial blood supply to the areolar complex. We also advocate the policy of not putting drain.<sup>[13],[14]</sup> Sterile dressing is applied and moderate pressure is applied with elastic tape, lower port site is not closed as it allows for drainage of aspiration fluid. Pressure garments are applied on third postoperative day after first check dressing. Transient ecchymosis was observed in 20% patients which got resolved by first week (fig 6,7).



Figure 6 Transient post-op ecchymosis on POD 2



Figure 7 Ecchymosis resolved after 2 weeks

Complications like hematoma, buttonholing of skin and partial necrosis of nipple were observed in three patients in our study. Barring one case of recurrence in which only liposuction was done initially, no other cases of recurrences were observed. Comparison of complication rate is described in table 2.<sup>[4],[10],[14],[15]</sup>

## CONCLUSIONS

Our surgical strategy of liposuction by 2 ports allows crosstunnelling, thus avoids any contour deformity. It does not necessitate gland excision in those cases, which are completely treated by liposuction alone. Peri-areolar incision is advantageous as by this incision whole gland can be completely excised under vision and doughnut of tissue below nipple can be left to avoid nipple deformity.

This strategy yields predictable results in terms of no major complication and low rate (5.9%) of minor complications. Better aesthetic results can be obtained with minimal recurrence by this procedure.

## References

1. Barros ACS, Sampaio MCM. Gynecomastia: physiopathology, evaluation and treatment. *Sao Paulo Med J.* 2012; 130(3):187-97.
2. Brown RH, Chang DK, Siy R, Friedman J. Trends in the Surgical Correction of Gynecomastia. *SeminPlast Surg.* 2015;29:122-130.
3. Mysore V. Tumescence Liposuction: Standard guidelines of care. *Indian J Dermatol Venereol Leprol.* 2008; 74(7):54-60.

4. Schröder L, Rudlowski C, Brünagel GW, Leutner C, Kuhn W, Walgenbach KJ. Surgical Strategies in the Treatment of Gynecomastia Grade I-II: The Combination of Liposuction and Subcutaneous Mastectomy Provides Excellent Patient Outcome and Satisfaction. *Breast Care.* 2015;10:184-188.
5. Bannayan GA, Hajdu SI. Gynecomastia: clinicopathologic study of 351 cases. *Am J ClinPathol.* 1972;57(4):431-437
6. Lemaine V, Cayci C, Simmons PS, Petty P. Gynecomastia in Male Adolescents. *SeminPlast Surg.* 2013;27:56-61.
7. Simon BE, Hoffman S, Kahn S. Classification and surgical correction of gynecomastia. *PlastReconstrSurg.* 1973;51(1):48-5
8. Trelles M, Bonanad E, Moreno-Moraga J, Alcolea J, Mordon S, Leclère FM. Laser-assisted lipolysis for gynecomastia: safe and effective skin retraction. *Rev. Col. Bras. Cir.* 2013; 40(1):023-031.
9. Mishra RK. Trans-nipple removal of fibro-glandular tissue in gynecomastia surgery without additional scars: An innovative approach. *Indian J Plast Surg.* 2014; 47:50-55.
10. Longheu A, Medas F, Corrias F, Farris S, Tatti A, Pisano G *et al.* Surgical management of gynecomastia: experience of a general surgery center. *G Chir (July/August 2016);*37(4):150-154
11. Hoşnüter M. An Ameliorated Approach For Sharp Resection In Gynecomastia Surgery. *Indian J Surg (September-October 2014)* 76(5):419-424.
12. Lee BH, Kwon YJ, Park JW, Hwang JH, Kim KS, Lee SY. Gynecomastia Surgery Is Associated with Improved Nipple Location in Young Korean Patients. *Arch PlastSurg* 2014;41:748-752
13. Khalil AA, Ibrahim A, Afifi AM. Response to: Comment to "No-Drain Single Incision Liposuction Pull-Through Technique for Gynecomastia" *AesthPlastSurg.* (2017) 41:992.
14. Keskin M, Sutcu M, Cigsar B, Karacaoglan N. Necessity of Suction Drains in Gynecomastia Surgery. *Aesthetic Surgery Journal.* 2014; 34(4):538-544.
15. 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 PlastSurg* 2016;5(3):287-292.

### How to cite this article:

Dr. Nilesh Shende *et al.*, 2019, Gynecomastia: Our Experience at Tertiary Centre. *Int J Recent Sci Res.* 10(06), pp. 33160-33163. DOI: <http://dx.doi.org/10.24327/ijrsr.2019.1006.3618>

\*\*\*\*\*