



DRAIN LESS, SCAR LESS AND PAIN LESS GYNAECOMASTIA SURGERY

Plastic & Reconstructive Surgery

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ABSTRACT

Gynaecomastia is a very common disorder in adolescent and adult males. The restoration of gender conformity of the chest wall is the fundamental desire of the male patient and the fundamental goal in treatment of gynaecomastia. The present study is an observational study where we operated on total of 57 breasts in 30 patients with single incision for tumescent infiltration, liposuction and gland excision and no post operative drains were placed. An average of 450 ml fat was aspirated from each patient ranging from 200ml to 650 ml. On follow up, no hematoma or seroma were noted in any of the patients. Around 50% of patients complained of reduced sensation around the nipple areola complex. We conclude that usage of drains can be safely omitted after liposuction and gland excision surgery for gynaecomastia with single periareolar access incision with pleasing aesthetic results.

KEYWORDS

Gynaecomastia; Liposuction; Gland Excision; Seroma; Hematoma

INTRODUCTION

Gynaecomastia is a very common disorder in adolescent and young adult males. Although it is a benign disorder but has notable psychological manifestations like low self-confidence, depression, anxiety and social phobia.^[1] The restoration of gender conformity of the chest wall is the fundamental desire of the male patient and the fundamental goal in treatment of gynaecomastia.^[2] Various surgical techniques have been described in terms of incisions, excisions, lipectomy and liposuction methods. Most of the time these methods are combined for the gynaecomastia treatment with variable reported results in terms of aesthetic outcomes as well as complications.

The main aim of gynecomastia surgery is to give a normal chest contour to the patient with minimal signs of breast surgery. The present study is an observational study where we operated on 30 patients with single incision for tumescent infiltration; liposuction and gland excision and no drains were placed post-surgery.

MATERIALS AND METHODS

We retrospectively studied 30 male patients of gynaecomastia who underwent surgery with single incision for tumescent infiltration, liposuction and gland excision without drain placement in our department of Plastic and Reconstructive Surgery. All patients were assessed clinically and graded as per Simon classification^[3] (Table 1).

Table 1. Simon Classification of Gynaecomastia

Grade	Description
I	Small enlargement, no excess skin
II A	Moderate enlargement, no excess skin
II B	Moderate enlargement, excess skin present
III	Marked enlargement with excess skin present

Pre-op work up included bleeding profile (APTT, PT and INR) to rule out bleeding disorders. All patients were counselled about surgical procedure, importance of compression garment application after surgery including pros and cons of surgery with and without drain application. Informed consent was taken. All the patients underwent Power assisted Liposuction (PAL) with or without gland excision depending on gland status. Post operatively patients were followed up for one month to rule out hematoma/seroma and further followed up for 06 months for long term complications.

Exclusion criteria were Patients with deranged bleeding profile and Patients on anti-platelet and anti-coagulation medication. These patients underwent surgery with liposuction and placement of drain in post-operative period.

Surgical technique:

All the surgeries were done under general anaesthesia. The breast tissue was infiltrated by 2 mm infiltration cannula through a stab incision at lower edge of areolar margin. The wetting solution consisted of Ringer Lactate containing 1ml of 1:1000ml Adrenaline

and 20ml of 2% Lignocaine per litre. Around 500ml to 1500ml of wetting solution was infiltrated (super wet technique) depending on size of breast and involvement of unilateral or bilateral breasts. After 15 min of completion of infiltration, liposuction was started using PAL. Suction cannula was passed through the same access incision used for infiltration after widening the incision. Initially 4mm cannula was used for aspiration followed by 3mm cannula for fine contouring. Contour changes were constantly assessed by direct observation and by palpation of breast between fingers and thumb. After obtaining satisfactory contour, fat surrounding breast tissue was feathered. If significant volume of fibrous gland was palpable after adequate liposuction, then open excision of fibrous gland tissue was done. Excision was done by periareolar incision in lower half circumference of the areola by extending the existing stab incision. Gland tissue was dissected through the incision and separated from the surrounding soft tissue using scissors or cautery. A small amount of gland tissue is left behind the nipple areola to prevent depression deformity. After haemostasis wound was closed in 2 layers using absorbable sutures Vicryl 3-0 (subcutaneous) and Monocryl 4-0 (subcuticular sutures). No drains are used. Dressing were done and pressure garment applied immediately after surgery before extubation. Operative site is examined the next day morning of surgery and patient discharged to home. Patient was advised to wear pressure garment all the time strictly for 01 month except while having shower. All strenuous activities like lifting heavy weight were advised to be avoided for one month after surgery. Patients were advised to review immediately if there was any swelling at the operative site. Patients were followed up after one month after surgery for any hematoma or seroma.

RESULTS

Total of 57 breasts in 30 patients including 03 cases of unilateral gynaecomastia and 27 bilateral gynaecomastia were operated with PAL. Except in two patients of bilateral gynaecomastia, all underwent gland excision via the periareolar incision. In those two patients only, liposuction was sufficient to achieve desired contour. Patients' age ranged from 18 to 30 year with an average age of 21.8 year. Distribution of patients as per Simon's classification is as per Table 2. All 3 unilateral cases were of Grade III Simon.

Table 2. Distribution of patients as per Simon's classification

Simons classification	Number of patients in study
Grade-I	2
Grade-II A	10
Grade- II B	8
Grade- III	10

On an average, 450 ml of fat was aspirated from each patient ranging from 200ml to 650 ml. In all patients compression garment was applied immediately after surgery. On follow up till 01 month post-op, no hematoma or seroma were noted in any of the patients. Patients were further followed up to 06 months. Around 50% of patients complained of reduced sensation around the nipple areola complex immediately

after surgery which improved gradually with time in all patients except one at 06 months of follow up. All the patients except one were satisfied about the contour correction and symmetry after the surgery. That one patient complained of residual fullness in lower pole of one breast as compared to other breast. He was followed up and underwent corrective touch-up liposuction after 06 months to achieve satisfactory contour correction and symmetry. No scar hypertrophy, hyper pigmentation or any other scar related issues were reported. No other significant complications were reported in any of the patients.

Figure-1. (a,b) Pre-operative and (c,d) post-operative photographs of patient with Simons Grade III gynecomastia

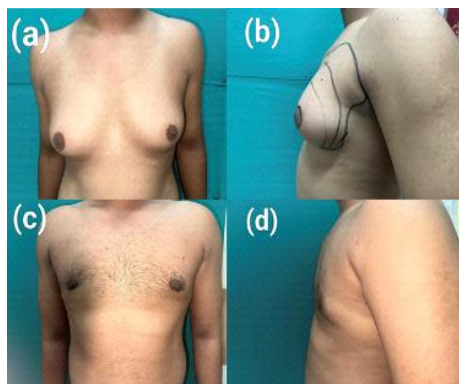


Figure-2 (a,b) Pre-operative and (c,d) post-operative photographs of patient with Simons Grade IIb gynecomastia

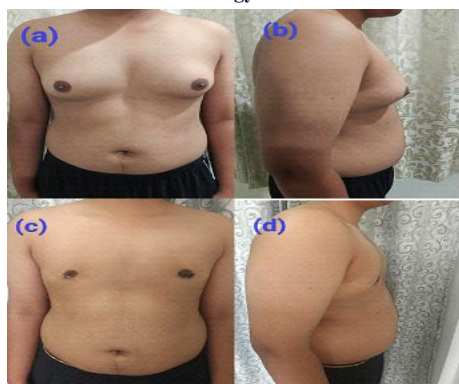
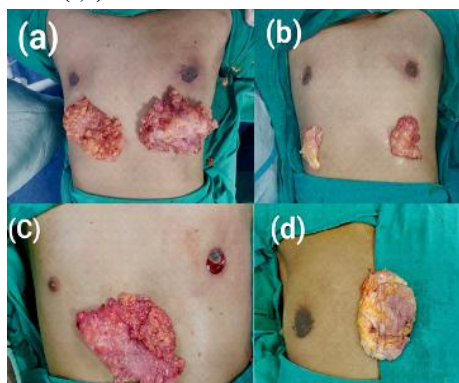


Figure-3. Intra op photographs after liposuction and gland excision in bilateral gynecomastia (a,b) and unilateral gynecomastia(c,d)



DISCUSSION

The goals of any gynecomastia surgery include smooth transition to surrounding subcutaneous tissues, absence of loose skin, appropriate size and position of the NAC, and minimal scars.^[4]

A comprehensive literature review on surgical management was done by Holzmer et al^[5] which included study of 1112 patients who underwent surgery for gynecomastia. They reported major complications (including seroma, hematoma, NAC necrosis, and dehiscence/infection) ranging from 0%-33%, with hematoma formation being the most common (5.8%) followed by seroma (2.4%).

Transient NAC hypoesthesia was not considered a major complication in this study; however, the literature reports NAC hypoesthesia in post operative period ranging from 3% to 19.2%.^[5] There was a higher rate of hematoma/seroma formation among authors who routinely utilized drain placement (9.78% versus 8.36%; $P = 0.0051$); however, this is likely attributable to the large discrepancy in percentage of grade III patients found in each group (50.23% versus 4.36%; $P = 0.0000$).^[5]

Earlier reports described gynecomastia surgery with placement of closed-suction drains which were conventionally used to reduce the amount of seroma formation at the operative site and minimize the dead space inside the breast reduction area. However, the reasons for drain use have not been described as well as studied, and the criteria for using them are not clear. Even if closed-suction drains are believed to help prevent possible complications, there is no evidence that these drains are beneficial in all cases or that they have particular benefits after gynecomastia surgery.^[6]

In our series, not using closed suction drains had no effect on hematoma or seroma formation. Similar to our study, Keskin et al^[6] studied 138 consecutive male patients who underwent gynecomastia surgery without drains of which only one patient developed post operative hematoma. In another study done by Delgado-Miguel et al,^[7] out of 21 consecutive patients operated without placement of closed drains, two patients developed mild seroma during follow up period which resolved spontaneously without aspiration.

In a study by Chao et al,^[8] there was an increased rate of seroma collection in group of patients with drain versus no drain, the authors were of the opinion that closed-suction drains may reduce rates of clinically significant seroma requiring needle aspiration. However they noted that the drains carry their own pertinent adverse effects (e.g., patient discomfort, cost and additional clinic visits).

Giving different incision for tumescent infiltration as well as gland excision and liposuction are described for ease of surgery ergonomically. But we did not find any difficulty in liposuction from same incision at lower edge of areolar margin. In a study done by Debo Chen et al^[9] 77 gynecomastia patients were studied retrospectively. They were divided into three groups. Group A (subcutaneous gland resection via areola incision), Group B (liposuction combined with single-hole endoscopic gland resection), and Group C (liposuction combined with three-hole endoscopic gland resection). Notably, the liposuction and single-hole endoscopic approach yielded superior postoperative patient satisfaction, aligning with minimally invasive principles and warranting broad clinical application.

In a study done by Yu-Chi wang et al^[10] 60 patients with mixed-type gynecomastia were treated with Open excision with periareolar approach in 30 patients (59 Breasts) and 30 patients (59 breasts) with vacuum assisted mastectomy (VAM) and power assisted liposuction (PAL). No drainage tubes were required in the study for postoperative hematoma/seroma prevention. The patients in the VAM+PAL group had significantly lower complication rates (18.64% vs. 3.39%, $p = 0.008$), particularly in bruising and NAC hypoesthesia. We have found that single incision periareolar access serves very well for PAL as well as gland excision without the use of drains. The results are pleasing and satisfactory for the patients (Fig 1 & 2).

CONCLUSION

Usage of drains can be safely omitted after liposuction and gland excision surgery for gynecomastia. Use of adrenaline infusion (super wet technique) and immediate post op application of pressure garment prevents formation of hematoma/seroma. Single periareolar incision for infiltration, liposuction and gland excision gives good access for gynecomastia surgery to achieve normal chest contour with minimal signs of breast surgery.

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