ORIGINAL ARTICLE

Treatment of Grade III Gynecomastia with Liposuction and Glandular Excision; Our Experience

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ABSTRACT

Background: Although gynecomastia treatment has evolved a lot but there are still many limitations to a perfect management plan specially for high grade gynaecomastia. Different methods have been applied to approach excess skin in these patients. All these methods result in visible scars which are cumbersome to patients as well as surgeons treating them. Managing these problems can help patients and surgeons greatly to increase their confidence.

Objective: The authors describe a useful technique of dealing with excess gland and skin in grade III gynecomastia without leaving many unsightly scars.

Methods: The study was performed on gynaecomastia patients. The study was conducted from January 2014 to December 2019 and 45 patients were included who underwent Liposuction and glandular excision followed by compression garments application. Outcome of the patients in terms of complications and aesthetic results was noted. Aesthetic Outcome was measured by the Surgeon ranging from 0 (Poor) to 5 (Excellent). Patient Satisfaction was also graded on a Scale from 0 (Unsatisfied) to 5 (highly satisfied).

Results: All patients were adults, ages 16 to 55. Seroma formation was observed in 15 patients. It was managed with simple aspiration. Six patients complained of Rippling and twelve patients complained of minor skin epidermolysis. Complain of skin or nipple necrosis or saucer deformity was not observed in any patient. Average patient satisfaction score was 4.75 and the surgeon observed score was 4.37.

Conclusion: Gynecomastia Grade III can be effectively treated with liposuction and gland excision preserving the skin in selected patients

Key words: Gynecomastia Grade III,Glandular excision,Liposuction, Treatment of Gynecomastia.

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Introduction

Gynecomastia is one of the very common problems presenting to plastic surgeons.[1] Gynecomastia affects 30%-70% of male population with trimodal distribution according to age of patient. [2]It occurs due to imbalance between levels of estradiol and testosterone. There may be abundance of breast tissue or fat or both[3] and the presentation may be as unilateral or bilateral. Grade III Gynecomastia[4] has always been a challenging case for patient as well as plastic surgeons to deal with. Psychosocial embarrassment is the most common cause bringing patient to seek surgical correction.[5.] Various techniques have been devised to manage this problem according to grade and

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severity. Although it is easy to treat Grade I and II with liposuction and residual gland excision, Grade III patients require excision of both glandular tissue and skin simultaneously to get proper shape of the chest. Quite frequently, excision of skin and glandular tissue leads to post operative contour deformity, unsightly scar formation and rarely necrosis of nipple areolar complex.[6] Scar related complications like keloid formation and hypertrophic scars are very common in Fitz Patrick type 3 skin and above.[9] These scars are unsightly and uncomfortable for patients and may further reduce patient's confidence. The senior author has treated quite a few patients with liposuction and excision of glandular tissue through a semicircular circumareolar incision without excision of skin. We believe that preserving skin and reducing the scars help as the skin gets retracted to a great extent within 4 to 6 months after surgery. In the present study we intend to share our experience of treating Grade III gynecomastia with preservation of skin and reducing the scars to increase patient's confidence, satisfaction and reduce post-operative complications.

Materials and Methods

This is a descriptive case series which was carried out at King Edward Medical University and Laser Praxis Clinic over the time period of January 2014 to December 2019. A non-probability purposive sampling technique was used. All cases of gynecomastia grade III were included in study. Patients with Diabetes Mellitus, Ischemic Heart Disease, and endocrine disorders and with previous surgical history for gynecomastia were excluded. A comprehensive history and examination were performed in all patients. The secondary causes of gynecomastia were ruled out. Pre-operative pictures of the patient in standard views were taken and marking of the areas to be treated was done in standing position.

All procedures were done under general anesthesia. The breast tissue was infiltrated, via a single stab incision in the inframammary fold, with a solution of normal saline, lignocaine (0.5%) and adrenaline (1:500,000). All patients received one dose of intra-operative intravenous antibiotics as prophylaxis for infection. After thorough liposuction, glandular excision was carried out through a semicircular circumareolar incision. After securing hemostasis, subcuticular sutures were applied to close circumareolar incision. No drains were placed. Compression garments was applied post operatively. Patients were followed up over 6 months post operatively. They were instructed about post-operative compression garments and massage therapy.

Demographic variables like age were noted. The aesthetic outcome was measured in two ways. The treating surgeon graded the aesthetic outcome on Surgeon Observed scale ranging from 0 (Poor) to 5 (Excellent). The patient satisfaction was also graded on a Scale from 0 (Unsatisfied) to 5 (highly satisfied). Average and means were calculated for demographic variables like age. Complications like pain, Hematoma, seroma, epidermolysis were observed. As this was a descriptive case series so no test of significance was applied.

Results

A total of 45 patients were included in study, operated over a period of 6 years (2014 to 2019). Their age ranged from 16 years to 55 years. Out of these, 3 cases were unilateral and 42 were bilateral grade III gynecomastia (Fig.1-4).Average patient satisfaction score

was 4.75. Average surgeon observed score was 4.37. Regarding the complications, 15 patients complained of post-op seroma formation which was managed by simple aspiration and compression dressing. Twelve patients complained of skin epidermolysis which was managed with dressings. No patient complained of skin or nipple necrosis. Rippling (fold formation) was noted in 6 patients but none of the patients requested for correction of skin contour. No patient came with complaint of post-operative hypertrophic scar.

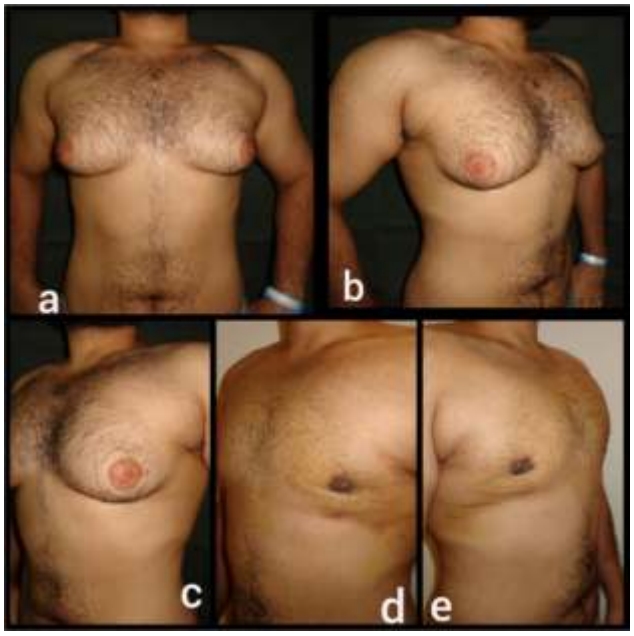

Fig 1. a),b),c) Pre op Pictures of a male with Simon's Grade III Gynaecomastia. d), e) Post op results after Liposuction and Glandular excision.

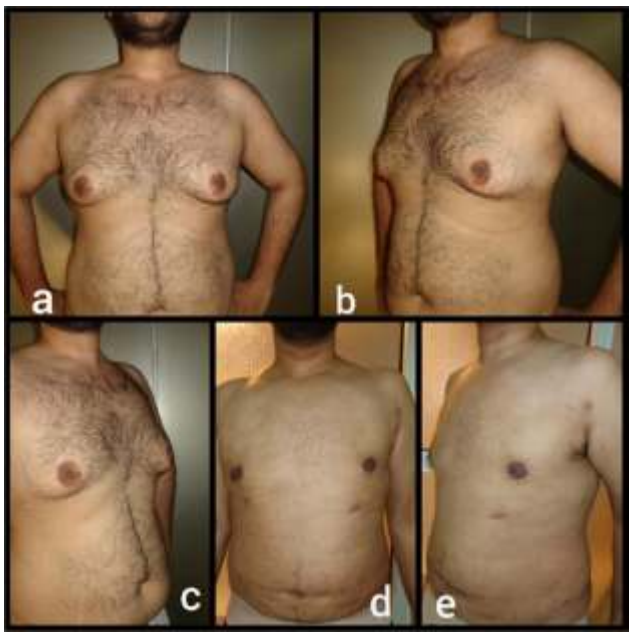

Fig 2. a), b), c) Pre op Pictures of 23years old male patient with Simon's Grade III Gynaecomastia. Excess skin and glandular tissue visible in all views. d), e) Post op results after Liposuction and glandular excision.

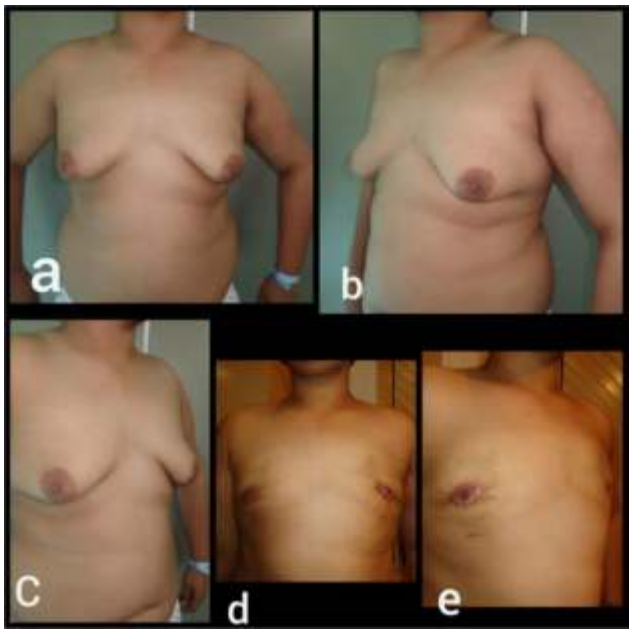

Fig 3. a), b), c) Pre op views of young male patient with Simon's grade III gynaecomastia. d), e) Post op results after 3 months with minimal scars. Epidermolysis is

visible in NAC which was managed conservatively.

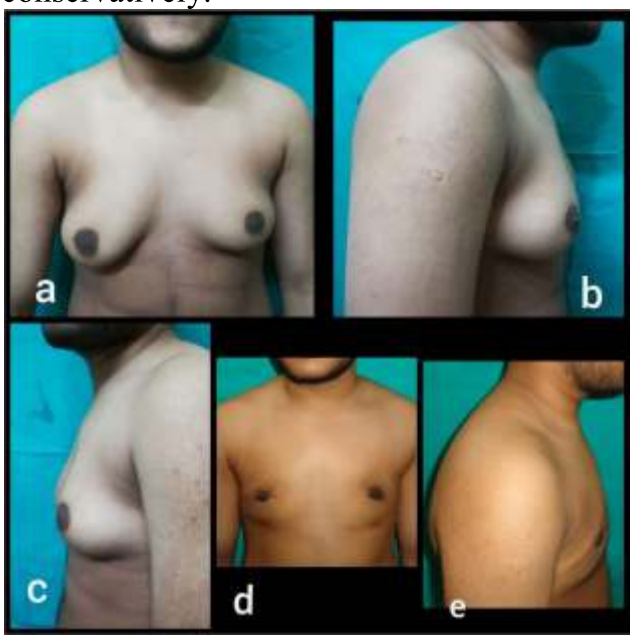

Fig 4.a) Frontal view of patient with Simon's grade III Gynaecomastia. b), c) Lateral pre op views d), e) Post op views showing visible reduction in breast size on both views with minimal scarring.

Discussion

Gynecomastia is a very common problem for male population especially in adult age group. In patients with lower grades of disease surgical management is relatively easy. In grade III gynecomastia, patient's skin excess is also a problem along with glandular and fibrous hyperplasia which needs special assessment and management. In past most of the patients with grade III have been approached for gland as well as skin excess through different techniques. These techniques lead to formation of unsightly scars, visible incision marks and long painful surgeries.[8]Not much data is available to describe management of grade III gynecomastia only by addressing gland excess and letting the skin modify and settle down post operatively without having to give extra incisions.

For management of excess glandular component we used both liposuction and glandular excision. In our study, we approached excess glandular tissue first with liposuction and then with glandular excision through circumareolar incision. Combined with liposuction for excess of gland tissue, excision of glandular tissue was first described by Teimourian[8] and now is a commonly used method. Sarkar A. et al.[9]used circumareolar skin excision along with liposuction and found that there was puckering of skin along the incision line due to purse-string effect of subdermal suture. Different techniques were used in past for skin reduction and preservation of nipple-areolar complex (NAC). NAC preservation on a de-epithelised flap, inferior pedicle reduction technique, horizontal ellipse with superior pedicel flap, bipedicle flap etc., were described to keep the neurovascular supply of the NAC intact, but these surgical techniques usually produce scars over male chest, which is aesthetically unappealing.[8]
In our case series, this technique was able to address both glandular as well as skin excess with strict post operative compression therapy. We observed that managing Grade III gynecomastia without skin incision can still lead to optimal outcome by reducing unnecessary scars, as post operatively the skin gets contracted during healing phase. There was minimal post-operative pain. Seroma formation was most common complication which was managed with simple aspiration. No patient needed revision surgery and surgical scar was not noticeable. Both surgeon and patients were satisfied with post operative results in terms of correction of pre operative problem as well as post

operative appearance of scars. However, our study was limited in a way that it was a small case series, all patients were operated by single surgeon and post op surgeon observed scale was also assessed by primary surgeon. Despite these limitations the study gives a future direction to further search for ways to less invasive and more productive management plan of grade III gynecomastia and incite questions towards finding solutions for all complications associated with conventional methods.

Conclusion

Grade III gynecomastia can be effectively treated with liposuction and gland excision preserving the skin in selected patients.

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