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Evaluation of Traditional Liposuction, VASER Liposuction, and VASER Liposuction Combined with J-plasma in Management of Gynecomastia

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Background: Because gynecomastia is one of the most considerable aesthetic procedures for men, we are researching in our article recent management methods for high grades of gynecomastia.
Methods: This prospective study included 45 individuals with gynecomastia, divided into 3 groups: group A (15 individuals) managed by traditional liposuction, group B (15 individuals) managed by vibration amplification of sound energy at resonance (VASER)-assisted lipoplasty, and group C (15 individuals) managed by VASER and J-plasma. Authors used a skin fold caliper for measurement of subareolar disk size and a Cutometer for assessment of skin pliability and firmness. The study was conducted at the Department of Plastic Surgery, Menoufia University Hospital, Egypt, and Reflect Center for Plastic Surgery in Riyadh, Saudi Arabia.
Results: Statistically significant differences were found among the groups in terms of reduction of subareolar disk size (assessed by skinfold caliper), skin redundancy (assessed by Cutometer), the need for a second stage of treatment, and patient satisfaction (by questionnaire).
Conclusions: The combination of VASER and J-plasma is effective for managing grade 2 and 3 gynecomastia, resulting in significant reduction in subareolar disk size, minimal skin redundancy with enhanced skin firmness, reduced need for further procedures, and improved patient satisfaction compared with traditional methods.
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INTRODUCTION

Gynecomastia is the term that describes any benign swelling of the breasts in men. The enlargement may be glandular or fatty, but it is more often a combination of the 2, induced by various causes ranging from endocrine to exogenous factors.[1]

For most individuals, the primary motivation for undergoing surgical procedures is the desire to eliminate the unpleasant breast enlargement. If there is a unilateral, firm breast lump, it is necessary to consider the possibility of breast cancer, although it is relatively uncommon in men.[2]

Gynecomastia has been recorded since ancient times. Until the 1970s, the only treatment was direct surgical excision, which often resulted in disfiguring scars, making the cure worse than the disease. The development of suction lipoplasty now allows the removal of all subcutaneous fat from a remote incision site without scarring in the breast area, although excision of some glandular tissue may still be necessary in some cases.[3]

Vibration amplification of sound energy at resonance (VASER; Solta Medical) technology is now being researched for potential surgical applications in the management of gynecomastia that are not included in conventional lipoplasty procedures. Various technologies have been developed to tighten the skin and improve body sculpting after liposuction. A simple deflation effect on the skin envelope and nonthermal inflammation of the fibrocollagenous matrix, which generates new blood vessels, collagen, and scar tissue, have been shown to result in approximately 10% shrinkage through the debulking of fat using suction-assisted liposuction.[4]

J-plasma (Apyx Medical) technology allows the application of heat to tissue in 2 distinct ways. First, heat is produced by the generation of the plasma beam itself,

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achieved by ionizing helium atoms and rapidly neutralizing them. Second, because plasmas are excellent electrical conductors, a portion of the radiofrequency energy used to charge the electrode and form the plasma travels from the electrode to the individual. This energy then heats the tissue through joule heating, which transfers current through the resistance of the tissue.[5]

This study aimed to evaluate traditional liposuction, VASER liposuction, and J-plasma techniques for managing gynecomastia in terms of the efficacy of VASER on the fatty-glandular component of gynecomastia and the effect of J-plasma on postoperative skin redundancy, aesthetic outcomes, patient satisfaction, and finally, the need for further surgical interference, postoperative complications, and patients' satisfaction.

PATIENTS AND METHODS

This prospective study involved 45 individuals with gynecomastia, who presented to the department of plastic surgery at Menoufia University Hospital, Egypt, and the Reflect Center for Plastic Surgery in Riyadh, Saudi Arabia. The individuals were randomly divided into 3 groups using a sealed envelope technique: group A (15 individuals), managed by traditional liposuction, either manual or power-assisted (MicroAire); group B (15 individuals), managed by VASER-assisted lipoplasty; and group C (15 patients), managed by VASER and J-plasma.

Randomization

Forty-five sealed envelopes were prepared, with 15 marked with "A," 15 with "B," and 15 with "C." Each patient selected an envelope to determine their treatment method.

Ethical Considerations

The nature, scope, and possible consequences of the clinical study were explained to all patients. Each participant signed an informed written consent in Arabic, which included approval for preoperative, intraoperative, and postoperative photography for scientific and research purposes. Ethical approval was obtained from the Ethical Committee of the Faculty of Medicine, Menoufia University, Egypt.

Inclusion Criteria

Male patients with gynecomastia grades 2 and 3 (Cordova classification), from 18 to 45 years of age.

Exclusion Criteria

Exclusion criteria were age younger than 18 or older than 45 years, previous surgery for gynecomastia, suspicious breast mass, and serious psychological instability.

Methods

Preoperative Evaluation

All patients underwent a comprehensive medical history review, clinical examination, routine preoperative investigations, determination of gynecomastia grade, and photography.

Takeaways

Question: What is the value of combining vibration amplification of sound energy at resonance (VASER)-assisted liposuction with the J-plasma technique in management of gynecomastia? Is it sufficient to dispense of surgical excision?

Findings: VASER-assisted liposuction is effective in management of gynecomastia by significantly reducing the subareolar disk size and thickness compared with traditional liposuction methods. J-plasma helps reduce excess skin redundancy, minimizing the need for surgical excision and avoiding disfiguring scars.

Meaning: The combination of VASER and J-plasma is effective for managing gynecomastia, resulting in more volume reduction, minimal skin redundancy, and improved patient satisfaction compared with traditional methods.

Operative Techniques

Skin Markings

In the standing position, areas for liposuction were marked topographically in concentric circles narrower toward the center (NAC) where the disk was palpated. Port sites for liposuction incisions were also marked.

Initial Evaluation of the Subareolar Disk

Measurement of the thickness of the subareolar disk in both sides of the breast by using skinfold calipers and documenting it before starting the infiltration process.

Infiltration

Most cases were started with axillary incisions. In some cases, inframammary fold or small periareolar incisions were added based on the gynecomastia grade and ease of access to the fatty-glandular component. Tumescent solution (1 mL epinephrine 1:1000, 10 mL sodium bicarbonate, and 20 mL lidocaine HCL 2% per 1 L of normal saline) was infiltrated. The total volume was based on the expected amount of liposuction. A waiting time of 10–15 minutes was observed before starting liposuction or VASER.

Lipoplasty Process

Each patient was subjected to the method of lipoplasty according to his group, as follows: group A: directly to power-assisted liposuction using MicroAire devices. Group B: VASER is applied mainly targeting the glandular component of the gynecomastia. The VASER machine is adjusted to V mode and 50% power (the duration of VASER treatment was variable according to the volume and the component of gynecomastia) and then liposuction was performed. Group C: VASER is applied mainly targeting the glandular component of the gynecomastia, as mentioned in group B. Then, liposuction was performed.

Finally, J-plasma was applied as follows: the hand piece was directed through the same ports used for liposuction in the plane between the skin and the fascia, as it was going through

smoothly with no resistance. The distribution of the J-plasma was done in imaginary lines 1–2 cm apart. Crisscrossing was done in some cases using another access port in which the skin redundancy was significant. The J-plasma settings were power 70% and gas flow 3.0 L/min, whereas the total energy by kilojoules was different according to the estimated skin redundancy and quality of the skin in each case.

Intraoperative Assessment

The primary results are assessed in the operating room immediately after finishing liposuction using the skinfold caliper that measures the remaining thickness in the disk area and comparing these measurements to those taken before starting infiltration and liposuction process, then documenting the difference in inches between the 2 measurements.

Closure, Drains, and Garment

In all cases, we applied pressure garments before the patient leaves the operating room. In most cases, we used drains according to the following criteria: (1) liposuction more than 500 mL for each side of the breast; (2) bloody aspirate; and (3) routinely for all patients of group C, in which we used the J-plasma to help elimination of the residual gas and fluid collections. Drains were kept for 3–4 days and removed when the fluid was less than 50 mL in the last 24 hours before removal.

Postoperative Follow-up and Outcome Measures

Postoperative follow-up and outcome measures consist of postoperative pain assessment and management, assessment of the viability of the NAC and the surrounding skin, assessment of the degree of edema and presence of seroma or hematoma, photography early and throughout the follow-up, and regular follow-up. The regular follow-up consists of the first visit 3–4 days postoperatively for drain removal, then once a week for the first month, and then once a month after that for 5 months (6 months total) for the assessment of the following items:

1. Symmetry of both breasts and irregularities by inspection and palpation;
2. Skin tightness and firmness using the Cutometer Dual MPA 580 (Courage+Khazaka electronic GmbH; a device used for measurement of skin pliability/firmness; the measuring principle of the Cutometer is based on the suction method, where negative pressure deforms the skin mechanically. The pressure is created in the device and draws the skin into the aperture of the probe and after a defined time, releases it again). Authors used the device in mode 1, R parameters (R0:UF), which measure skin pliability/firmness in millimeters (amplitude at the end of the suction phase). The Cutometer was used as a final evaluation method 6 months after surgery;
3. Complications (seroma, hematoma, skin, and NAC burn or pigmentations);
4. Patient satisfaction (each patient was asked in a questionnaire to choose between unsatisfied, satisfied, and very satisfied);
5. Assessment and figuring out the need for a second-stage procedure either for surgical removal of the gland or for reoperative liposuction;
6. The recovery period.

The following are the statistical analysis and the tests that were used in our study.

Data were expressed as number and percentage for qualitative data, mean and SD for quantitative normally distributed data, and median and interquartile range for quantitative non-normally distributed data. The Pearson χ^2 test was used to study association between 2 qualitative variables. The Monte Carlo test was used significantly to study association between 2 qualitative variables if any of the expected cell counts were less than 5. One-way analysis of variance (ANOVA) test (F) was the test of significance used to study association between more than 2 quantitative normally distributed variables. Kruskall–Wallis test (K) is the test of significance used to study association between more than 2 quantitative not normally distributed variables. A P value of less than 0.05 was set to be statistically significant.

RESULTS

There was no statistically significant difference among the investigated groups regarding the following variables: age, marital status, body mass index, apparent etiology, family history of gynecomastia, duration of the current complaint, components of gynecomastia by clinical examination, and the grade of gynecomastia.

The authors found a statistically significant difference among the examined groups concerning intraoperative clinical assessment. Patients in groups B and C (in which we used VASER) showed significant reduction of the subareolar disk size comparing to patients in group A in which only traditional liposuction was used. Skinfold caliper was used to measure the size of the disk in millimeters before and immediately after the liposuction process for all patients in the 3groups (Table 1).

Regarding postoperative pain, there was a statistically significant difference among the examined groups in the early postoperative period (Table 2).

The primary difference among the 3 groups was observed in skin redundancy after the surgery (Fig. 1), which was assessed subjectively by only 1 surgeon who performed the procedures in all 45 patients and also measured objectively by the Cutometer Dual MPA 580, which showed significant difference regarding skin firmness in favor of group C in which J-plasma was used (Figs. 2, 3). Also authors found statistically significant difference regarding the need for a second stage of treatment and patient satisfaction in favor of group C (Table 3).

DISCUSSION

Gynecomastia is a benign enlargement of the male breast resulting from a proliferation of the glandular component of the breast. It should be differentiated from pseudogynecomastia (lipomastia), which is characterized by fat deposition without glandular proliferation.[5]

Table 1. Intraoperative Assessment Data in Studied Groups (n = 45)

Variable	Group A (n = 15) N (%)	Group B (n = 15) N (%)	Group C (n = 15) N (%)	Test of Significance	*P*
Total volume of liposuction (mL)					
Mean ± SD	1460 ± 299.52	1580 ± 256.91	1500 ± 223.61	F = 0.817	0.449
Range	900–2000	1100–2000	1100–2000		(NS)
Intraoperative improvement (clinically by inspection and palpation)				χ^2 = 9.38	^{MC}0.036*
Mild	2 (13.3)	0 (0)	0 (0)		
Moderate	6 (40)	2 (13.3)	2 (13.3)		
Significant	7 (46.7)	13 (86.7)	13 (86.7)		
Intraoperative improvement (objectively; using skinfold caliper)					
A. Skin fold difference before and after liposuction for the right breast					
Mean ± SD	4.93 ± 2.28	16.53 ± 4.76	20.40 ± 4.66	K = 30.93	<0.001*
Range	1–8	9–22	14–29		
Post hoc test	p1 < 0.001*, p2 < 0.001*, p3 = 0.221				
B. Skin fold difference before and after liposuction for the left breast					
Mean ± SD	4.47 ± 5.68	19.13 ± 7.41	20.07 ± 5.23	K = 26.51	<0.001*
Range	–8 to 13	8–36	10–31		
Post hoc test	p1 < 0.001*, p2 < 0.001*, p3 = 0.611				

*Statistically significant.

F, one-way ANOVA test; group A, managed by traditional liposuction with power-assisted cannulas (MicroAire); group B, managed by VASER-assisted lipoplasty; group C, managed by J-plasma; K, Kruskal–Wallis test; MC, Monte Carlo test; NS, nonsignificant; p1, between group A and group B; p2, between group A and group C; p3, between group B and group C.

Table 2. Early Postoperative Data in Studied Groups (n = 45)

Variable	Group A (n = 15) N (%)	Group B (n = 15) N (%)	Group C (n = 15) N (%)	Test of Significance	*P*
Postoperative pain score					
Median (IQR)	5 (4–6)	4 (3–5)	4 (3–4)	K = 7.54	0.023*
Post hoc test	p1 = 0.032*, p2 = 0.010*, p3 = 0.673				
Skin viability					
Viable	15 (100)	14 (93.3)	14 (93.3)	χ^2 = 1.05	^{MC}1.000
Partial NAC necrosis	0 (0)	1 (6.7)	1 (6.7)		(NS)
Seroma					
Present	1 (6.7)	1 (6.7)	2 (13.3)	χ^2 = 0.55	^{MC}1.000
Absent	14 (93.3)	14 (93.3)	13 (86.7)		(NS)
Hematoma					
Present	2 (13.3)	0 (0)	1 (6.7)	χ^2 = 2.14	^{MC}0.763
Absent	13 (86.7)	15 (100)	14 (93.3)		(NS)
Burns					
Present	0 (0)	0 (0)	1 (6.7)	χ^2 = 2.05	^{MC}1.000
Absent	15 (100)	15 (100)	14 (93.3)		(NS)

*Statistically significant.

F, one-way ANOVA test; group A, managed by traditional liposuction with power-assisted cannulas (MicroAire); group B, managed by VASER-assisted lipoplasty; group C, managed by J-plasma; IQR, interquartile range; K, Kruskal–Wallis test; MC, Monte Carlo test; NS, nonsignificant; p1, between group A and group B; p2, between group A and group C; p3, between group B and group C.

Gynecomastia often causes significant emotional and psychological trauma, especially in young individuals.[6]

Surgical treatment depends on the size and the degree of fat and fibrous tissue present. In most cases, the volume of the breast hypertrophy is less than 1 L and lipoplasty can be performed with a small (4 or 5 mm) blunt cannula introduced from a remote incision site in the axilla.[7]

Hammond et al[8] modified the previously reported pull-through techniques using ultrasound-assisted liposuction with good results, and Ramon et al[9] introduced the concept of endoscopic visualization to these techniques in 2005.

The treatment of gynecomastia has evolved toward less invasive approaches. With the advent of suction-assisted and ultrasound-assisted lipectomy, the majority of patients with gynecomastia can achieve excellent results with minimal scar burden.[10]

Our study divided participants into 3 groups: group A used traditional liposuction, group B used VASER-assisted liposuction, and group C used both VASER-assisted liposuction and J-plasma. We targeted grades 2 and 3 gynecomastia according to the Cordova and Moschella classification, which is a morphological classification

Fig. 1. A, Grade 3 gynecomastia—anterior view (before). B, Grade 3 gynecomastia—oblique view (before). C, Grade 3 gynecomastia—anterior view (6 months after VASER-assisted liposuction and J-plasma). D, Grade 3 gynecomastia—oblique view (6 months after VASER-assisted liposuction and J-plasma).

Fig. 2. A, Grade 3 gynecomastia—anterior view (before). B, Grade 3 gynecomastia—right oblique view (before). C, Grade 3 gynecomastia—left oblique view (before).

based on the structural components of the breast (skin, NAC, inframammary fold, glandular tissue, and adipose tissue) and the relationship between the inframammary fold and the NAC. In grade I, only retroareolar hypertrophy is present. In grade II, there is an increase in volume that goes beyond the nipple-areola complex, but the NAC is always above the submammary fold. In grade III, the submammary fold is evident, the NAC is projected at the same height as the submammary fold and a certain degree of skin flaccidity and ptosis, and sometimes the presence of skin striae may be evident. In grade IV, the breasts are similar to women with increase in volume, enlargement of the areola, presence of well-defined submammary fold, presence of cutaneous striae, and NAC projected below the inframammary fold.[11]

Although grade 3 was challenging to treat without surgical excision, we aimed to demonstrate the maximum effect of J-plasma in reducing excess skin after liposuction without skin excision.

Initial publications described gynecomastia surgical procedures that included the installation of closed-suction drains. These drains were traditionally utilized to reduce

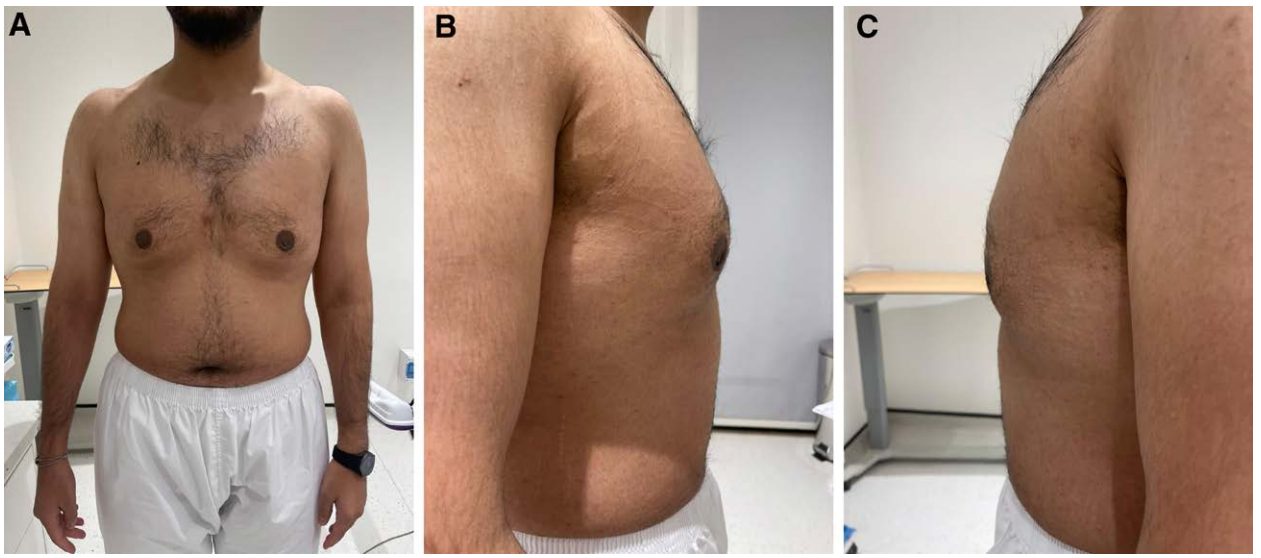

Fig. 3. A, Grade 3 gynecomastia—anterior view (3 months after VASER-assisted liposuction and J-plasma). B, Grade 3 gynecomastia—right lateral view (3 months after VASER-assisted liposuction and J-plasma). C, Grade 3 gynecomastia—left lateral view (3 months after VASER-assisted liposuction and J-plasma).

Table 3. Outcomes in Studied Groups (n = 45)

Variable	Group A (n = 15) N (%)	Group B (n = 15) N (%)	Group C (n = 15) N (%)	Test of Significance	*P*
Symmetry of both breasts				$\chi^2 = 1.80$	$^{MC}0.588$
Symmetrical	12 (80)	14 (93.3)	14 (93.3)		(NS)
Asymmetrical	3 (20)	1 (6.7)	1 (6.7)		
Volume reduction				$\chi^2 = 13.27$	$^{MC}0.002$*
Moderate	10 (66.7)	2 (13.3)	2 (13.3)		
Significant	5 (33.3)	13 (86.7)	13 (86.7)		
Skin redundancy (clinically by inspection and palpation)				$\chi^2 = 10.01$	$^{MC}0.029$*
Minimal	6 (40)	8 (53.3)	13 (86.7)		
Moderate	7 (46.7)	7 (46.7)	2 (13.3)		
Significant	2 (13.3)	0 (0)	0 (0)		
Skin pigmentations				$\chi^2 = 1.22$	$^{MC}0.689$
Present	4 (26.7)	2 (13.3)	2 (13.3)		(NS)
Absent	11 (73.3)	13 (86.7)	13 (86.7)		
Need for second stage				$\chi^2 = 8.51$	$^{MC}0.017$*
Yes	6 (40)	2 (13.3)	0 (0)		
No	9 (60)	13 (86.7)	15 (100)		
Recovery (d)				K = 1.45	0.484 (NS)
Median (IQR)	3 (2–3)	3 (2–3)	3 (2–6)		
Patient satisfaction				$\chi^2 = 12.41$	$^{MC}0.012$*
Unsatisfied	6 (40)	3 (20)	1 (6.7)		
Satisfied	9 (60)	8 (53.3)	6 (40)		
Very satisfied	0 (0)	4 (26.7)	8 (53.3)		
Cutometer mode 1, R parameters; (R0:UF) values analysis after 6 mo				F = 37.16	<0.001*
Mean ± SD	15.73 ± 2.87	14.40 ± 3.27	7.53 ± 2.13		
Post hoc test		p1 = 0.596, p2 < 0.001*, p3 < 0.001*			

*Statistically significant.

F, one-way ANOVA test; group A, managed by traditional liposuction with power-assisted cannulas (MicroAire); group B, managed by VASER-assisted lipoplasty; group C, managed by J-plasma; IQR, interquartile range; K, Kruskal–Wallis test; MC, Monte Carlo test; NS, nonsignificant; p1, between group A and group B; p2, between group A and group C; p3, between group B and group C.

Fig. 4. A, Grade 3 gynecomastia—anterior view (before). B, Grade 3 gynecomastia—right lateral view (before). C, Grade 3 gynecomastia—left lateral view (before). D, Grade 3 gynecomastia—anterior view (6 months after VASER-assisted liposuction with J-plasma). E, Grade 3 gynecomastia—right lateral view (6 months after VASER-assisted liposuction with J-plasma). F, Grade 3 gynecomastia—left lateral view (6 months after VASER-assisted liposuction with J-plasma).

the amount of fluid that was present at the surgical site as well as the amount of dead space that existed among tissues. However, it is commonly assumed that closed-suction drains can help reduce potential complications related to the condition.[12]

In the present study, authors used the drains to shorten the recovery period and maximizing the effect of J-plasma in reducing the skin redundancy by obliterating the dead space resulting from the liposuction together with the pressure garment.

We had 1 patient in group B who had partial NAC necrosis and early signs of skin sloughing of a small area surrounding the NAC. Although in group C, we had 1 patient who got a second superficial burn; less than 1% affected most of the NAC and about 2 × 3 cm of periareolar skin. This complication was due to a technical issue and was managed conservatively. After 3 months, it was totally healed with minimal skin pigmentation.

According to Fikry and Nasr,[13] the early complication rate was 27.7% (5 of 18), where the most common early complication was hematoma and seroma. This finding was in line with others that have been published. During the same research project, the rate of revision was 5.5%.[13]

Other series of care of high-grade gynecomastia with liposuction and concentric circumareolar skin excision indicated complication rates of 10% of 58 instances.[14]

In our study, there was no statistically significant variance among the examined groups concerning postoperative symmetry, skin pigmentation, and recovery period. However, there was a significant difference in skin redundancy, the need for a second stage, and patient satisfaction, favoring group C, which used VASER and J-plasma.

In the investigation that was carried out by Abdali et al,[15] the findings demonstrated that unfavorable scars occurred in 2 individuals (16.7%) and 10 individuals (83.3%) of the groups that underwent liposuction alone and liposuction combined with incision, respectively. A P value of 0.002 indicates that there was a statistically significant variance among the groups. The results of that study also revealed that there was a statistically significant variance among

Fig. 5. Grade 3 gynecomastia—anterior views before and 6 months after VASER-assisted liposuction with J-plasma.

the 2 categories ($P = 0.03$) in terms of the postoperative requirement for skin removal. In the group that merely underwent liposuction, none of the patients retained their skin; however, in the group that underwent liposuction and incision, 6 of the individuals did. At last, patient satisfaction was shown to be statistically higher in the group that simply underwent liposuction as opposed to the group who underwent liposuction and incision ($P = 0.04$).[15]

The final outcome of our work was assessed around 6 months after surgery for each patient. We choose some parameters to evaluate the outcomes of the 3 groups and to demonstrate how far the use of VASER with and without the J-plasma will be significant in management of gynecomastia.

The final outcome regarding skin redundancy is one of the most important parameters in our study for when we used the J-plasma. We got promising results with patients in group C a few months after the surgery (Fig. 4).

A skin Cutometer was used to measure the skin elasticity, firmness, and distensibility 6 months after surgery for each patient of the 3 groups. The skin redundancy was very minimal and almost not noticed by both the patient and the surgeon in most of the candidates of the J-plasma group.

These findings were confirmed by the statistical analysis of the results of the cutometer. The effect of the J-plasma in the term of adherence of the skin to the bed (the fascia) and recoil of the redundant skin after liposuction was considerable, and the difference between the 3 groups of study was statistically significant.

We also noticed improvement of the skin redundancy in candidates of group B, in which we used the VASER solely without the J-plasma. This can be due to the thermal effect of the VASER to the skin and subcutaneous tissue.

In our study, patient satisfaction was assessed early postoperatively and 6 months after surgery. The patient was asked to choose between unsatisfied, satisfied, and very satisfied. There was statistically significant difference between the 3 groups regarding the patient satisfaction.

Most of the patients of group C were very satisfied (Fig. 5) with only 1 patient unsatisfied, whereas in the other 2 groups, there were variable results between satisfied and very satisfied. The largest number of unsatisfied patients was found in group A, in which 6 of 15 patients were not satisfied, and when asked about the reason of unsatisfaction, the answer was because of the residual volume (mainly the firm subareolar disk) and also the noticed excess redundant skin.

CONCLUSIONS

VASER-assisted liposuction is effective in management of gynecomastia by significantly reducing the subareolar disk size and thickness compared with traditional liposuction methods.

J-plasma helps reduce excess skin redundancy, minimizing the need for surgical excision and avoiding disfiguring scars. The combination of VASER and J-plasma is effective for managing gynecomastia, resulting in more volume reduction, minimal skin redundancy, and improved patient satisfaction compared with traditional methods.

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DISCLOSURE

The authors have no financial interest to declare in relation to the content of this article.

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- *The Renuvion® APR Handpiece is intended for the delivery of radiofrequency energy and/or helium plasma where coagulation/contraction of soft tissue is needed. Soft tissue includes subcutaneous tissue.*
- *The Renuvion APR Handpiece is intended for the coagulation of subcutaneous soft tissues following liposuction for aesthetic body contouring.*
- *The Renuvion APR Handpiece is indicated for use in subcutaneous dermatological and aesthetic procedures to improve the appearance of lax (loose) skin in the neck and submental region.*
- *The Renuvion APR Handpiece is intended for the delivery of radiofrequency energy and/or helium plasma for cutting, coagulation and ablation of soft tissue during open surgical procedures.*
- *The Renuvion APR Handpiece is intended to be used with compatible electrosurgical generators owned by Apyx Medical.*