

Understanding the Psychological Effects and Body Image Satisfaction after Cosmetic Surgery

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Annotation. Background: Obesity is a rapidly increasing condition that has been categorised as an epidemic in recent decades. Most patients experience a decline in their body image and self-esteem, resulting in adverse effects on their physical and emotional well-being. Consequently, they become more inclined to seek laparoscopic sleeve gastrectomy surgery as cosmetic surgery.

Objective: The current study aimed to assess psychological aspects and body image satisfaction level outcomes after laparoscopic sleeve gastrectomy surgery.

Patients and methods: 65 people were recruited in the cross-sectional study who underwent laparoscopic gastric sleeve surgery, and their ages ranged between 30 - 45 years. Clinical and surgical data were collected for people from different hospitals in Iraq for a period from April 5, 2022, to August 27, 2023, in terms of the duration of surgery, body mass index, and survival rate. Hospitalization, mortality, complication rate, pain rate, and assessments of psychological aspects and health-related quality of life of patients after surgery.

Results: This study recorded the results of laparoscopic gastric sleeve surgery in terms of the surgery time was 94.2 ± 15.6 minutes, the number of bleeding cases was 6, the follow-up duration



was four months, the complication rate included 6 cases, and there was a significant increase in the improvement of quality of life, the most prominent of which was the physical aspect with $93.14. \pm 2.68$, and the psychological aspect was 96.42 ± 1.78 , the weight loss success rate was 81%, and the satisfaction rate with body image after gastric sleeve surgery was 93%. The results of the study identified a high improvement in psychological aspects as severe symptoms after the operation compared to before the operation for obese patients, as worry, fears, depression, and lack of enjoyment were found.

Conclusion: The current study indicated that laparoscopic sleeve gastrectomy surgery is the optimal treatment option, like plastic surgery, in successfully losing weight for patients after surgery, which leads to a significant improvement in health and psychological quality and high satisfaction with body image.

Keywords: Laparoscopic sleeve gastrectomy surgery; Obesity; Post-operative complications; Scale HADS; quality of life; and Body image satisfaction.

Introduction

Obesity surgery has become the treatment of choice for morbid obesity. The surgical techniques that have been used have been changing in recent years; basically, restrictive techniques and malabsorptive techniques are currently combined [1]. These techniques are very effective for weight loss since they ensure [2]. On the one hand, obese patients do not take as much food, and on the other, the food eaten is not well used by the body. In fact, the most common reasons for an unsatisfactory result after obesity surgery, excluding medical and technical causes, are related to behavioral and psychological variables such as the patient's inability to follow dietary indications or problems adapting to the changes that occur after the intervention. This alone justifies the psychological follow-up of obese patients. [3-5]

The increasing prevalence of morbid obesity and the increased incidence of super-obese patients (body mass index [BMI] > 50 kg/m²) seeking surgical treatment has led to the development of surgical techniques designed to provide adequate excess weight loss (PEP) with the lowest possible morbidity. A recent study has emphasized that weight loss also allows to improve life expectancy. [6-8]

The two most frequently performed procedures are the laparoscopic adjustable gastric band (BGAL) and the laparoscopic gastric bypass (BGL) [9]. The laparoscopic sleeve gastrectomy (GML), a restrictive operation, consists of a vertical gastrectomy including the entire major curvature of the stomach [10]. Although GML is associated with higher morbidity than BGAL, it avoids some of the disadvantages of BGL, such as excessive restriction of intake, marginal ulcerations, and dumping syndrome [11]. The authors report their experience with GML, evaluating the safety and efficacy of this procedure as an independent operation. [12]

In agreement with the last studies, they reached an agreement to define by stages of the post-surgical care of the obese patient [13]. They establish a first stage of bonding with the patient in their immediate postoperative process in which they consider a hospital visit to the patient during his admission key [14]. The second corresponds to the immediate post-surgical emotional stage that would last from 15 days to a month in which the anxieties and fears that appear in the patient should be addressed. In the third stage, changes related to eating would stand out (1 to 3 months) in which eating, which used to be a pleasure or a consolation, now becomes annoying [15,16]. The fourth



stage is called the change in body image or "honeymoon" phase that would, last until the first six months, where the weight is lost quickly and the silhouette sharpens, although problems such as sagging will soon appear [17]. The fifth stage that they define is the acquisition of new management of their relationships, family, and social context, in which social skills should be acquired when the patient plays new roles [18]. They conclude by pointing out that they agreed on one year as an adequate time for post-surgical follow-up, favoring new management of behaviors and emotions independently. [19]

However, it is not uncommon for patients to require longer psychological support or accompaniment to overcome conflicts or due to the appearance of inappropriate eating behaviors after many months after surgery [20]. Therefore, we think that the time should be extended to at least two years, considering that after obesity surgery, reconstructive surgeries come where the results are not always as expected. [21]

Patients and methods

For a period from April 5, 2022, to August 27, 2023, in different hospitals in Iraq, we presented a cross-sectional study that evaluated and analyzed outcomes related to psychological aspects and individuals' satisfaction with body image after gastric sleeve surgery. This study collected 65 obese people who underwent breast augmentation surgery, and their ages ranged between 30-45 years. This study characterized the demographic data and preoperative outcomes of participants who underwent gastric sleeve surgery in terms of age, sex, body mass index [kg/m^2], comorbidities, ASA, smoking status, education status, employment status, and income level.

Regarding the outcomes of laparoscopic gastric sleeve surgery, this study recorded the clinical outcomes during and after laparoscopic gastric sleeve surgery for obese patients, which included both the surgical time, the rate of people who experienced bleeding, measurements of heart rate, systolic blood pressure, diastolic blood pressure, length of stay in the hospital, mortality rate, and duration of follow-up. The rate of patients admitted to the intensive care unit and the rate of complications associated with people during the follow-up, which lasted four months after the surgical operation.

Regarding the results of successful weight loss, this study determined the rate of progression of excess weight loss based on the body mass index before surgery during follow-up according to the BMI rates associated with the patients before surgery, which were classified as (32 - 34) kg/m^2 , (35 - 37) kg/m^2 , (38 - 40) kg/m^2 , and greater than 40 kg/m^2 . Moreover, this study evaluated the rate of postoperative pain for patients who underwent laparoscopic sleeve gastrectomy during days 1, 2, and 3 using the Numerical Rating Scale (NRS) with a range between (0 - 10), where 0 represents no pain and ten represents There is severe pain. Also, this study recorded an evaluation of the participants' satisfaction rates with their body image after laparoscopic gastric sleeve surgery within the criteria for rating the satisfaction rate, which included excellent, good, fair, and poor. In addition, this study conducted an evaluation of the psychological aspects that were highlighted to people undergoing laparoscopic gastric sleeve surgery and their impact on people before and after surgery using the HADS scale with a range ranging from 0, there are no symptoms of depression or anxiety, to 3, which represents the presence of severe symptoms of anxiety or depression. Also, this study evaluated the quality of healthy life of the participating people after laparoscopic gastric sleeve surgery within the criteria of the questionnaire related to the quality of



healthy life, which included the physical aspect, the psychological aspect, the emotional aspect, and the aspect of practicing daily activities.

Results

Table 1: Demographic characteristics and preoperative outcomes of patients in this study.

Characteristics	Number of patients [n=65]	Percentage [%]
Age, years		
30 – 34	12	18.46%
35 – 39	18	27.69%
40 - 45	35	53.85%
Gender		
Males	13	20%
Females	52	80%
BMI [kg/m ²]		
32 – 34	5	7.69%
35 – 37	25	38.46%
38 – 40	27	41.54%
> 40	8	12.31%
Comorbidity		
Hypertension	33	50.77%
Diabetes	16	24.62%
Obstructive sleep apnea	8	12.31%
Thyroid disease	3	4.62%
Others	5	7.69%
ASA		
I	18	27.69%
II	35	53.85%
III	12	18.46%



Smoking status		
Yes	16	24.62%
No	49	75.38%
Education status		
Primary	10	15.38%
Secondary	11	16.92%
Post-graduated	44	67.69%
Employment status		
Employed	46	70.77%
Unemployed	19	29.23%
Income level, \$		
Less than 900 \$	26	40%
More than 900 \$	39	60%

Table 2: Surgical outcomes of patients who underwent laparoscopic sleeve gastrectomy.

Characteristics	Patients' outcomes
Surgery time [min]	94.2 ± 15.6
Bleeding N [%]	6 [9.23%]
Heart rate (mean ± SD)	84.85 ± 6.38
Systolic blood pressure [mm Hg], (mean ± SD)	82.22 ± 7.62
Diastolic pressure [mm Hg], (mean ± SD)	66.87 ± 7.78
Length of stay, days	3.6 ± 0.8
Follow-up, months, (mean ± SD)	Four months
Mortality rate, N [%]	0 [0 %]
ICU admission	0 [%]



Table 3: Post-operative complications.

Complications	Number of patients [n=65]	Percentage [%]
Staple line leakage	1	1.54%
Staple line haemorrhage	1	1.54%
Wound infection	2	3.08%
Pneumonia	1	1.54%
Urethral bleeding	1	1.54%
Total	6	9.23%

Table 4: Determine weight loss outcomes of patients who underwent to laparoscopic sleeve gastrectomy during follow-up according to changes in BMI levels.

Follow-up, months	Weight loss results
Preoperative	43.05 ± 3.12
1	23.4 ± 3.6
2	24.16 ± 3.21
3	25.83 ± 4.4
4	26.36 ± 3.5



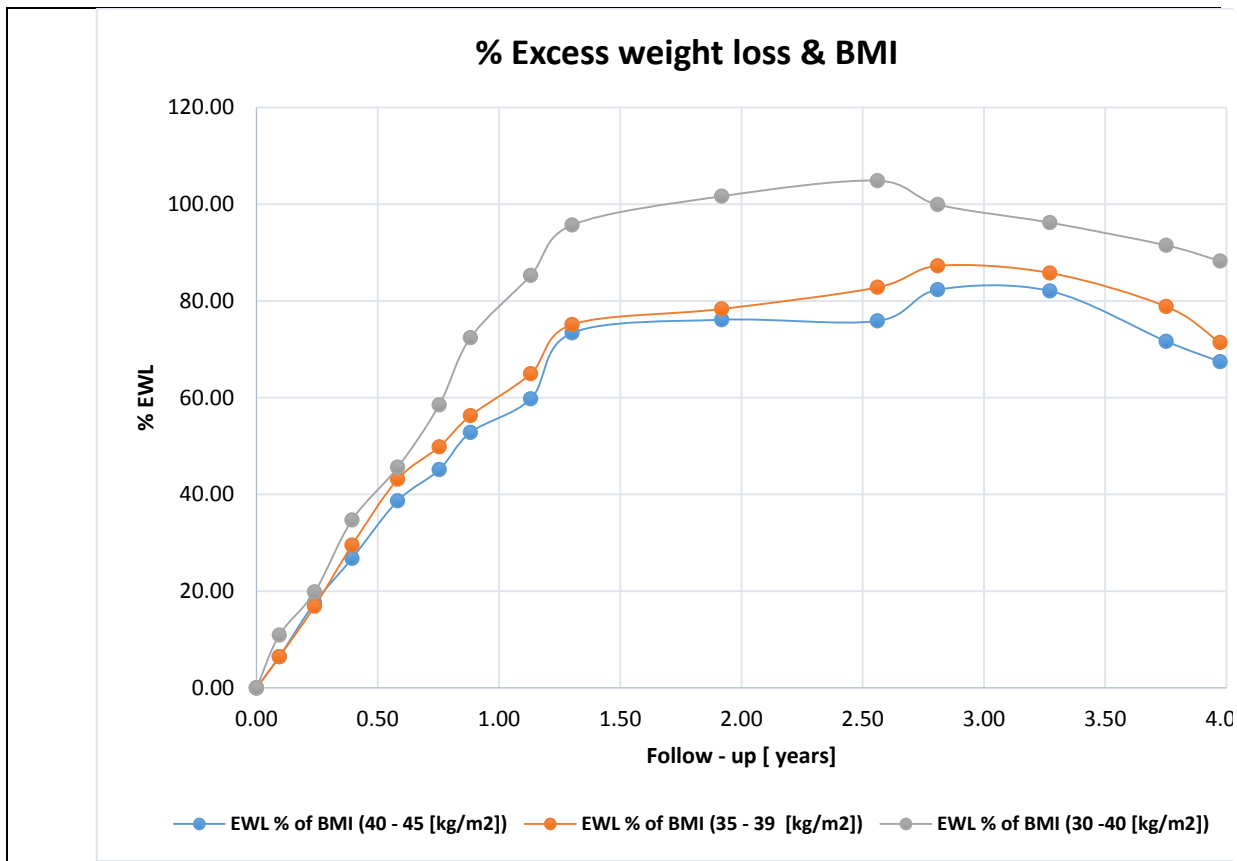


Figure 1: Determine the rate of excess weight loss evolution based on BMI preoperative during follow-up.

Table 5: Post-operative pain of patients who underwent laparoscopic sleeve gastrectomy during days 1, 2, and 3 by Numeric Rating Scale (NRS).

Time [days]	Numeric Rating Scale
One day	2.6 ± 0.5
Two days	1.31 ± 0.40
Three days	0

Table 6: Post-operative outcomes of patients' body image satisfaction.

Satisfaction domains	Pre-operative	Post-operative
Excellent	2 [3.08%]	55 [84.62%]
Good	5 [7.69%]	5 [7.69%]



Fair	12 [18.46%]	4 [6.15%]
Poor	46 [70.77%]	1 [1.54%]
Total of patients	65 [100%]	65 [100%]

Table 7: Assessment of the psychological effect on patients preoperatively and postoperatively by Scale HADS.

Psychological aspects	Pre-operative	Post-operative
Feeling tense or wound up	2.3 ± 0.42	0.35 ± 0.01
Worry	1.8 ± 0.22	0.41 ± 0.26
Fears	2.46 ± 0.26	0.38 ± 0.08
Loss of interest in daily activities	2.71 ± 0.12	0.28 ± 0.015
Feeling miserable	2.58 ± 0.11	0.33 ± 0.01
Depression	2.30 ± 0.15	0.24 ± 0.04
Lack of enjoyment	1.02 ± 0.16	0.62 ± 0.09
Difficulty relaxing	2.01 ± 0.18	0.71 ± 0.024

Table 8: Assessment of health quality of life for patients after laparoscopic sleeve gastrectomy surgery.

QOL domains	Outcomes
Physical function	93.14 ± 2.68
Psychological function	96.42 ± 1.78
Emotional Function	89.57 ± 3.79
Practice activities	81.16 ± 5.76



Discussion

Our study recorded the clinical results of patients, which showed that patients in the age group between 40 - 45 were the highest, which included 35 patients, females were 52, and those who performed surgery more often than males with 13, and that the body mass index (32 - 34) included 5 cases, BMI (35 - 37) included 25 cases, body mass index (38 - 40) included 27 cases, body mass index (more than 40) included 8 cases, the most common comorbidities recorded for obesity patients were high blood pressure with 33 patients and diabetes with 16 patients, the number of smoking patients was 24.62% and the non-smoking patients were 75.38%.

The surgical results of the patients were recorded, and it found that the surgical time was 94.2 ± 15.6 minutes, the number of bleeding cases was 6, the diastolic blood pressure was 66.87 ± 7.78 , the systolic blood pressure was 82.22 ± 7.62 , the heart rate was 84.85 ± 6.38 , and the duration of stay in the hospital was 3.6 ± 0.8 days and the follow-up period was four months. There were no deaths, and the admission rate to the intensive care unit was 0 cases.

The complication rate included 6 cases, the most prominent of which were surgical infection and staple line leakage. Weight loss results during follow-up showed that before surgery, the average body mass index was 43.05 ± 3.12 ; in the first month, it was 23.4 ± 3.6 ; in the second month, it was 24.16 ± 3.21 ; in the third month, it was 25.83 ± 4.4 , in the fourth month it was 26.36 ± 3.5 . Moreover, the results of the pain rate for patients after surgery were found to be 2.6 ± 0.5 on the first day, the second day was 1.31 ± 0.40 , and the third day was 0. This study concluded that there was a significant increase in the improvement of quality of life, the most prominent of which was the physical aspect with 93.14 ± 2.68 and the psychological aspect was 96.42 ± 1.78 . The results of the study identified differences and variations in the rates of symptoms of anxiety and depression, as worry, fears, depression, and lack of enjoyment were found.

Prior studies have demonstrated that gastric sleeve surgery is having a favourable effect on overall weight reduction outcomes. Typically, patients may anticipate a substantial reduction in their surplus weight throughout the first year after the surgical procedure. Research indicates that weight loss outcomes differ. However, many individuals may get a reduction of 70% to 80% in their surplus weight throughout the first two years of weight loss. [22]

American study revealed that a significant number of patients have enhanced body image and overall well-being after the procedure [23]. Shedding a substantial amount of weight may enhance self-assurance, enhance physical mobility, and mitigate the health hazards linked to obesity. Patients often experience enhanced positivity and satisfaction with their physical appearance after surgical procedures. [24]

Although gastric sleeve surgery may provide substantial advantages, it is crucial to take into account the possible hazards and consequences linked to any surgical intervention. Possible consequences including infection, haemorrhage, and unfavourable responses to anaesthesia. Furthermore, patients may encounter postoperative complications that include nausea, emesis, or alterations in gastrointestinal function. [25]



Conclusion

This study demonstrated that laparoscopic sleeve gastrectomy surgery is a highly effective and high-quality therapeutic procedure for achieving substantial weight loss in patients with severe obesity, which cause a positive impact in the psychological and physical well-being of patients but also leads to significant improvements in terms of self-esteem, confidence, and overall satisfaction with their postoperative body image.

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