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Pattern of changes in quality of life of obese patients after sleeve gastrectomy in Sulaimani provence –Kurdistan-Iraq, based on 4 years experience in two bariatric centers

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ABSTRACT

Background: Obesity influences all aspects of the life of obese patients physically, psychologically, socially and monetarily, it is not only a disease but rather a beginning point of a group of ailments and inabilities, which gradually impacts and changes all aspects of their life.
Objectives: The changes in the Quality of life in respect to the amount of access weight lost after sleeve gastrectomy.
Patients, materials and methods: A prospective longitudinal study evaluating 40 female patients who underwent laparoscopic sleeve gastrectomy within 4 years, starting from July 4th, 2012 up to July 5th, 2016.
Results: More than three-quarter of the patients were not satisfied with their body before their operation, but six to twelve months after their weight loss; (N = 36, 90%) of them were satisfied with their new body image. Half of the patients were unhappy before their operation, but twelve months later (N = 31, 77.5%) of them became much happier. Regarding satisfaction with the body image, noticeable improvement occurred since (N = 36, 90%) of them were satisfied with their new body image. While, most of them have had low self-esteem and (N 27, 67.5%) of the patients had no self-esteem at all, 12 months after the operation (N = 35, 87.5%) felt great improvement in their self-esteem (p-value = **.040**). A significant decrease in appetite was noticed in (N = 39, 97.5%) of the patients after 12 months.
Conclusion: Significant changes in the parallel pattern to the extent of EWL were noticed in the quality of life of morbidly obese patients after laparoscopic sleeve gastrectomy.

1. Introduction

Obesity is a worldwide medical issue [1], achieving pestilence extents and is rapidly turning into a noteworthy general wellbeing concern [2–5]. Morbid obesity is related to illnesses and medical conditions such as Type 2 diabetes mellitus, coronary illness, stroke, hypertension and malignancies, joint degeneration, liver disorders, venous stasis and urinary incontinence [6].

The exponential increment in obesity worldwide has brought into concentration the absence of compelling techniques for treatment or prevention [1].

Customary strategies for weight reduction, for example, change in eating routines and exercise, are less compelling than weight loss surgery in the corpulent populace. Just surgery brings about sustained weight reduction for super-obese patients, being a successful means in the treatment of gruesome obesity [1–5]. Prompting sturdy weight reduction, huge and kept up in the long haul and improves higher weight-related hazard factors [4,7,8].

Bariatric surgery is related to a moderately low number of complexities and seems to bring about a decrease in mortality hazards due to the determination of comorbidities. Since the presentation of laparoscopic sleeve gastrectomy, (LSG) has increased, expanding reliability as a remaining solitary essential bariatric method [9]. The relative straightforwardness of the operation, the absence of a foreign body or requirement for numerous postoperative changes, and a worthy safety profile are highlights that interest to numerous patients and bariatric specialists [10,11].

Notwithstanding weight reduction, understanding wellbeing enhances as far as metabolic, macrovascular, and microvascular illnesses, brings about better personal satisfaction, alongside psychosocial prosperity [4,7,8,10].

LSG altogether enhances strolling and additionally a scope of movement of the joints, encouraging a physical movement of obese patients that might cause stamped weight reduction after bariatric surgery [12,13].

In a rundown, bariatric surgery is related to an improvement in

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insulin achievement, fat tissue reactive substances, and QoL [14].

2. Patients and methods

Through prospective observational work which is fully compliant with the STROCSS criteria [15], evaluating 40 morbidly obese married female patients with age ranging from 25-34 years with a mean of 27 years. Their mean Body Mass Index (BMI) is 43kg/m^2 (40–50). Who underwent Sleeve gastrectomy (SG) within 4 years from July 4th, 2012 up to July 5th, 2016.

Here we aimed in eliminating gender differences in the answers to our questionnaire, thus we choose all the patients from the same gender, as it was discovered; there are actually differences in the way women's and men's brains are structured and in the way they react to events and stimuli: indicating that women typically excel in language-based subjects and in language-associated thinking [16].

Informed consents were signed by all the patients. The study was endorsed by the Ethics Committee of the Medical College in the University of Sulaimani.

All patients underwent complete evaluation before the operation, including endoscopy and abdominal ultrasonography. Additional investigations were performed according to the risk profiles of each individual patient.

Patients were followed up after one week, one month, monthly for 3 more months after the operation and continue follow up bimonthly to the present day.

An explained questionnaire based on Five-Point Likert scale [17,18], arranged in the form of indirect statements in order to minimize central tendency bias and acquiescence bias. Three people conducted the interview, one of them was a female senior nurse, to ensure the comfortability of patients in answering the questions. Explanations were provided to the patients and the reason behind the interview in order to obtain the informed consent. Patients were encouraged to respond to the questions with their true feelings, any positive as well as any negative feelings they might have had.

In the interviews; data was collected regarding the quality of their life before the operation and 6 & 12 months after the operation, questions were declared and directed towards the importance of exercise and loss of weight. The patients were also asked about their social life, their psychological feelings, their self-esteem, their appetite, ease of movement (different postures in everyday activities or during sitting). Answers to each question were rated as (*not at all, just a little, not so much, much and too much*).

The collected data was analyzed by SPSS version 21.

3. Results

After the collection and the analysis of the data and the tabulation of it, we compared the BMI, EWL and their responses to each question of the questionnaire regarding the direction of the changes as shown in Tables 1–7.

Regarding the preoperative level of QOL of the patients, scoring was different for each question, i.e; 87.5% of them had answered with (Score 1 = not at all) for (Controlling satiety and food intake). Those who had higher scoring (Score 2 = just a little) were 40% for (Any physical obstacle for success in their jobs). But 60% of the patients gave answers with a score (3 = not so much) for (Importance to have better body shape, wearing the ordinary fashion for their age). While 87.5% of the patients gave answers (Score 4 = much) for (feeling sad). For higher scoring 75% and 82.5% of the patients gave answers with (Score 5 = too much) for (importance of weight loss) and (nervousness and embracing by unimportant matters) as shown in (Table 3).

Table 1
Showing loss of grades of BMI in the patients in 3, 6 and 12 months after the operation.

Number of Patients	BMI, before surgery	BMI, 3 months after the operation	BMI, 6 months after the operation	BMI, 12 months after the operation
20	41.5 ± 1.5	35.75 ± 0.75	33.5 ± 0.50	31.5 ± 0.50
8	44.5 ± 0.5	35.50 ± 1.50	33.5 ± 1.50	32.0 ± 1.00
7	47.0 ± 1.0	38.25 ± 0.25	35.0 ± 1.00	34.0 ± 1.00
5	49.5 ± 0.5	40.00 ± 1.00	37.0 ± 1.00	36.5 ± 1.50

Note: Half of the patients lost (5.70 ± 1.12 kg/m^2) of their BMI in 3,6 and 12 months respectively.

Table 2
Showing range of access weight before surgery and the percentage of access weight loss (%EWL) in the patients after 3, 6 and 12 months after the operation.

EBW, before surgery	%EWL, after 3 months	%EWL, after 6 months	%EWL, after 12 months
58.75 ± 16.25 kg	33.25 ± 2.25%	45.15 ± 3.75%	49.2 ± 4.30

Note: All the patients lost access body weight (EBW) in 3,6 and 12 months in the form of EWL (33.25 ± 2.25%), (45.15 ± 3.75%) and (49.2 ± 4.30%) respectively.

Some aspects of QOL have been selected for comparison before and after operation in their scores, we included the questions which are comparable and could be asked before and later after the operation visits, details are shown in (Table 4).

Score details are shown in Tables 5 and 6, which represents changes in QOL, 6 and 12 months after the operation. For more clarification; the highest and lowest scores (1 = not at all & 5 = much) are detailed in Table 6, to show the changes in those aspects over time and with weight loss in the patients.

Improvement in most aspects of the life of the patients has been noticed. Their sexual attractiveness became better and sex became regular from (N = 16, 40%) and (N = 12, 30%) to (N = 39, 97.5% and N = 32, 80%) respectively as shown in (Table 7 and Fig. 1).

Negative thoughts in the patients declined from (N = 10, 25%), to (N = 0, 0%) after 12 months from their operations. Their appetite decreased and their feeling of satiety increased from (N = 2, 5%) to (N = 39, 97.5%). While spending time with their friends and their social life improved from (N = 0, 0.0%) to (N = 35, 87.5%). Before the operation only (N = 5, 12.5%) felt easiness in making postures comfortably such as crossing their legs, while (N = 1, 87.5%) and (N = 37, 92.5%) of them felt this ease after their operations in 6 and 12 months respectively.

4. Discussion

Obesity is widely known as a major health risk factor, and bariatric surgery has proved to be significantly effective and a safe procedure [8], results in sustainable and effective reduction in body weight [19,20], on a long-term basis [21], which provides meaningful weight loss and improvement in the quality of life [22], which is an effective alternative to the current standard procedures [23].

The ultimate goal of bariatric surgery is weight loss and the resolution of obesity-related comorbidities to improve psychosocial functioning and quality of life (QOL) in morbidly obese patients [24]. QOL will be improved after surgery because surgical treatment achieved significant weight loss [25], which may be seen as early as 3 months after surgery. By 6 months after surgery, patients may improve to the extent of the same quality of life scores as the reference population [26].

Searching literature one may feel that there is a lack of adequate prospective data on quality-of-life (QOL) in patients undergoing laparoscopic sleeve gastrectomy [19], which made it worthy to explore this aspect of LSG.

The patients in the current work have lost (33.25 ± 2.25%), (45.15 ± 3.75%), (49.2 ± 4.30) of their EW after 3, 6 and 12 months respectively. The more and sustained the weight loss is, the greater will