

Quality of Life after Sleeve “Bariatric” Operations

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Abstract

Background and objectives: Laparoscopic sleeve gastrectomy consider as one of the most effective and common bariatric treatments to lose weight and improve quality of life. Our aim is to evaluate the quality of life after laparoscopic sleeve gastrectomy, in view of their health, social, and psychological well-being.

Methods: This study is carried out at Paky Hospital between 01.09.2019 and 31.03.202. We recorded the body mass index, physical examination, and medical history of 50 patients before sleeve gastrectomy with assessing the quality of life after sleeve gastrectomy through a special questionnaire where it is included with core symptoms, physical, psychological, social, operation-specific items and medical updates.

Results: More than three-quarter of the patients (90%) became happier with the results after the surgery, (86%) of them became more able to do their daily activities and to cope with stress. 50% of the sample had poor sleep quality, this rate decreased to 26% after the surgery. Out of 50 Patients 10 of them had cardiovascular disease and 9 of them had diabetes, while after operation it decreased to 2 and 3 respectively.

Conclusions: Sleeve gastrectomy is associated with significant weight reduction and improvement in the quality of life of obese patients.

Key words: Bariatric surgery, Laparoscopic sleeve gastrectomy, Quality of life.

Introduction

World Health Organization (WHO) defines obesity as abnormal or excessive fat accumulation that presents a risk to health. It is a major risk factor for a number of chronic diseases, including diabetes, cardiovascular diseases and many cancers.¹ Unfortunately, obesity increases at an international level, and in many countries, it reached an epidemic level.² The fact of obesity being a worldwide epidemic, which is fueled by lazy lifestyle and dense diet, has contributed for many unpleasant records and events in the history of mankind.³ As per (WHO), Quality of Life (QoL) is defined as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. Again, QoL can be defined as

the degree of satisfaction and happiness regarding the emotional, mental, social, physical and spiritual aspects of individual lives.⁴ Many studies have shown that an increase in body mass index BMI leads to a decrease in QoL, especially in view of physical aspects and pain, even when there is no any other chronic disease. In addition, depression and mood disorders are more likely to develop within obese people and specially those who got obese at an early age.⁵ Thus, QoL is one of the main measures for the treatment efficacy after bariatric procedures.⁶ One of the bariatric procedures is Laparoscopic Sleeve Gastrectomy (LSG), which is considered as the most available effective treatment and the one that helps to get more durable and significant weight loss.³ Laparoscopic Sleeve Gastrectomy is the

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most commonly performed bariatric procedure worldwide, and one of its main advantage compared with other procedures is keeping the intestine intact.⁵ There are many measurable outcomes of bariatric procedures e.g. weight loss, resolution or improvement of comorbidities and increase in life expectancy,² positive changes in behavior, personality and

Patients and methods

This study is a prospective study and carried out between 01.09.2019 and 31.03.2020, in Paky Hospital, Erbil City, Kurdistan Region of Iraq. Paky Hospital is a private hospital, one of the main hospitals for Bariatric Surgery in the Region. Each month around 15-20 LSG operations done by a well experienced team of surgeons. A total of 50 persons were chosen in a randomized pattern, by selecting the first 10 names of each list during the period of the study. However, only 50 patients were agreed to be recruited in the study. The participants who were added expressed their interests to join the study. They have to be above the age of 18 years, free to participate and operated for the first time with LSG. Those who performed the operation in less than six months were excluded. A special questionnaire has been prepared to assess the Quality of Life after LSG, where it is included with core symptoms, physical items, psychological items, social items, operation-specific items and medical updates. The questions were included with pre and post-operative findings and characteristics like demographic characteristic (age, civil status, educational level...etc.), medical history, social life, BMI and some physical examination (blood pressure, pulse rate, respiratory

Results

Fifty persons underwent sleeve gastrectomy. The (mean age \pm SD) was (37.18 \pm 8.88)years, ranging from 25–65 years. The largest proportion of the sample (44%) was 25-34 years, and 22% were

correction of serious psychiatric issues like depressive symptoms.⁷Our objective from this study is to evaluate the QoL, for individuals who underwent LSG, in view of their health, social and psychological wellbeing and performance. This evaluation will help us to answer the question of “Do people who underwent LSG get benefit in view of their QoL?”.

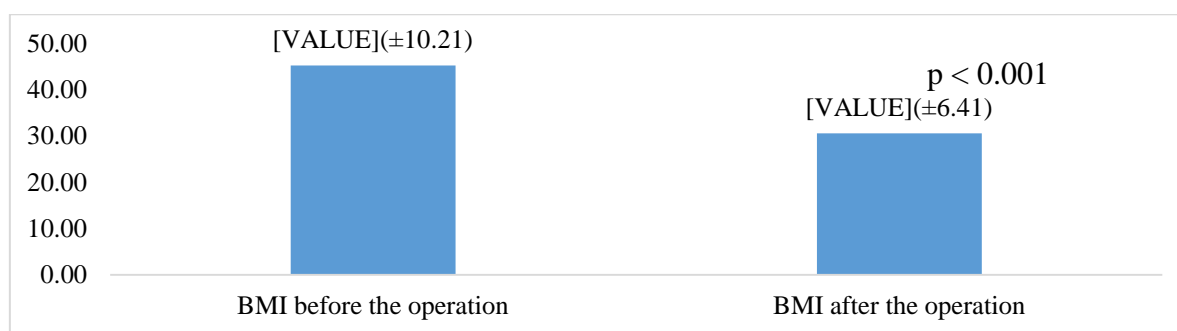
rate). The researcher informed the patients and explained the study for them in their native languages. A verbal consent has been taken from the patients. The patients were free to withdraw at any time from the study. Ethics approval has been taken from Research Ethics Committee at Kurdistan Higher Council of Medical Specialties, Erbil, Iraq. The data was used only for this study and should remain confidential. Using of data for another study should be through the hospital and patient’s agreement. Data collection has been done after taking hospital permission for choosing fifty patient’s files randomly and using the data within the files (including contact phone numbers) for the study for follow up and contacting the patients during the period of the study. The data collection has been done by contacting the patients. Data were analyzed using the Statistical Package for Social Sciences (SPSS, version 25). Paired t-test was used to compare the means of variables measured before the operation with those measured after the operation. McNemar test was used to compare the proportions measured before the operation with the proportions measured after the operation. A p-value of ≤ 0.05 was considered statistically significant.

aged ≥ 45 years. Female patients (70%), 78% were married, and 66% had children, 70% has post-graduate degrees, 36% were housewives and 30% were smokers, Table (1)

Table (1): Basic characteristics of the studied sample

	No.	(%)
Age (years)		
25-34	22	(44.0)
35-44	17	(34.0)
≥ 45	11	(22.0)
Gender		
Male	15	(30.0)
Female	35	(70.0)
Marital status		
Single	11	(22.0)
Married	39	(78.0)
Having children		
Yes	33	(66.0)
No	17	(34.0)
Educational level		
Secondary	9	(18.0)
University	6	(12.0)
Postgraduate	35	(70.0)
Occupation		
Student	3	(6.0)
Public sector employee	9	(18.0)
Free job	15	(30.0)
Trade	4	(8.0)
Retired	1	(2.0)
Housewife	18	(36.0)
Smoking		
Non-smoker	12	(24.0)
X-smoker	2	(4.0)
Passive smoker	21	(42.0)
Active smoker	15	(30.0)
Total	50	(100.0)

The mean BMI before the operation was 45.30 ± 10.21 Kg/m² which, was significantly ($p < 0.001$) higher than the mean after the operation (30.60 ± 6.41 Kg/m²), Figure (1).

**Figure (1):** Means of BMI before and after the operation.

The majority (90%) of the patients developed bowel urgency after the operation, 52% developed vomiting, 20%

developed regurgitation, 16% developed dysphagia, and 14% developed constipation, Table (2).

Table (2): Post-operative symptoms and complications

	No.	(%) n = 50
Bowel urgency	45	(90.0)
Vomiting	26	(52.0)
Regurgitation	10	(20.0)
Dysphagia	8	(16.0)
Constipation	7	(14.0)
Nausea	6	(12.0)
Post-operative complications	2	(4.0)
Diarrhea	2	(4.0)
Blood in stool	1	(2.0)
Eating speed		
Slow	34	(68.0)
Normal	15	(30.0)
Fast	1	(2.0)

Fifteen patients (30%) were active smokers before the operation, but after the operation, only three of them continued smoking. The difference in smoking status before and after the operation was significant ($p = 0.002$). Ten patients (20%) had CVDs before the operation. This rate decreased significantly to 2% after the operation ($p = 0.004$). The table shows also that 6 patients (12%) had diabetes

before the operation which decreased to 6% after the operation ($p = 0.250$). Half of the sample had poor sleep quality before the operation which decreased to 26% after the operation ($p = 0.023$). Regarding siesta, 50% of the patients did not used to take a nap, and 48% used to take one-hour nap. After the operation, 30% did not take a nap, and 62% took one-hour nap, Table (3).

Table (3): Prevalence of diseases and habits before and after the operation

	Before		After		p- value
	No.	(%)	No.	(%)	
Smoking					
Non-smoker	12	(24.0)	12	(24.0)	
Ex-smoker	2	(4.0)	6	(12.0)	
Passive smoker	21	(42.0)	29	(58.0)	0.002*
Active smoker	15	(30.0)	3	(6.0)	
CVD					
Yes	10	(20.0)	1	(2.0)	
No	40	(80.0)	49	(98.0)	0.004†
Diabetes					
Yes	6	(12.0)	3	(6.0)	
No	44	(88.0)	47	(94.0)	0.250†
Sleep quality					
Poor	25	(50.0)	13	(26.0)	
Good	25	(50.0)	37	(74.0)	0.023†
Siesta					
0 hour	25	(50.0)	15	(30.0)	
1 hour	24	(48.0)	31	(62.0)	
2 Hours	1	(2.0)	3	(6.0)	
3 hours	0	(0.0)	1	(2.0)	NA
Total	50	(100.0)	50	(100.0)	

*By McNemar-Bowker Test. †By McNemar test. NA: Not applicable.

The majority (90%) of patients felt happy after the operation, 86% can cope with stress, 86% can perform the daily activities, 70% had feeling of strength, and 68% can practice leisure activities. Regarding the negative symptoms, more than one quarter (28%) of the patients

wake up at night, and 24% feel nervous. The proportion of patients feeling each the following symptoms was 22%: fatigue, unwell feeling, unfit endurance, and frustration. Only 4% were bothered by treatment.

Table (4): Post-operative physical symptoms and feelings of the patients

	No.	% (n = 50)
Positive symptoms		
Happiness	45	(90.0)
Cope with stress	43	(86.0)
Daily activities	43	(86.0)
Strength feeling	35	(70.0)
Leisure activities	34	(68.0)
Negative symptoms		
Wake up at night	14	(28.0)
Nervousness	12	(24.0)
Fatigue	11	(22.0)
Unwell feeling	11	(22.0)
Unfit endurance	11	(22.0)
Frustration	11	(22.0)
Bothered by treatment	2	(4.0)

Discussion

As its well and widely known, obesity is a major risk factor for health and it does have negative impacts on different aspects of life including physical, mental, psychological/emotional and social. All of these frame each individual's qualities of life.¹⁻² Once these aspects are not acceptable, people will seek for a help, and bariatric operations including sleeve gastrectomy was and still a very reasonable help.³ It is true that the majority of people will undergo this operation and their main goal is to lose weight, but still on the other hand it is important to remind that the QoL will improve to a better side.¹ It was clear and evident that the mean BMI after the operation is significantly lower than the mean BMI before the operation. So LSG helped them to get into a better shape of their bodies, soul and get more self-confidence. Besides that, the majority were females which reflect the fact of females being more concern with their body shape.⁸ Fifteen of them were active smokers before the operation, but after the

operation only three of them continued smoking. That did happen because of the fact that losing weight gives obese people the power to improve their health/ their QoL and offers them a chance to quit smoking.⁹ It is known that obesity is associated with poor sleep quality and/or short sleep duration. Half of the people had poor sleep quality before the operation which decreased to 26% after the operation. Losing weight after the operation was a very well recognized push for nearly all of them to feel happier than before the operation, almost all of them (90%) were happier after the operation, this result is also consistent with that obtained by Ahmad HO who showed that 77% of the patients were much happier and 90% of them were satisfied with their body image after the surgery.⁹ Bariatric surgery with good postoperative bariatric care program can lead to improvement in physical activity.¹⁰ Tettero observed a significant increase in leisure activity of the objectives, who underwent sleeve

gastrectomy compared to preoperative activities, losing weight and cardiorespiratory fitness.¹⁰ In this study it also showed the change in their energy and how they got better in feeling more strength and capable to perform the daily activities, 68% of the patients were more active physically after the operation. It did show too that they were more coping with stress. It is good to mention that there were some negative symptoms after the operation like waking up at night, feeling nervous and frustration but their percentage was low. It's well known that bariatric operations have impacts on some chronic diseases like cardiovascular diseases (CVD) and diabetes mellitus.¹¹ Recently many studies have shown that obesity may cause cardiovascular disease through various mechanisms such as

Conclusions

Bariatric operations including LSG do have a positive impact on people's lives by improving their QoL to be better and healthier. It is better to remind that we encourage more studies to be performed within this subject and include people who are post operation for more than 6 months

Conflicts of interest

The author reports no conflicts of interest.

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atherogenic lipid profiles, subclinical inflammations, endothelial dysfunctions and increased sympathetic tones.¹² Several evidences have shown that adverse cardiovascular risk profile of obese patients highly improves after losing weight through bariatric surgeries (including bariatric sleeve).¹³ As it also obvious in this study that within 50 patients 20% of them had CVD and 12% of them had diabetes before operation, while postoperatively the rate is significantly decreased to 2% (CVD) and 6% (Diabetes Mellitus). These changes are same with other studies like.¹³⁻¹⁴ This affects the QoL to get better in another way by making people healthier with less medications and making them happier with less fear from their diseases.

and focus on those who stopped following the right ways and rules to stay healthy. It is also important to get more studies comparing different types of bariatric operations in view of their impacts on QoL.

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