A RETROSPECTIVE STUDY ON THE PERIOPERATIVE PREDICTORS OF WEIGHT REDUCTION IN POST-BARIATRIC SURGICAL PATIENTS

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Introduction

Obesity is a worldwide epidemic disease and a major risk for co morbidities such as Diabetes Mellitus type 2 (DM2), arterial hypertension, stroke, coronary heart disease, pulmonary disease, and different cancers.
The age of onset of obesity (AOO) varies greatly, and can occur in childhood, adolescence, or adulthood. Obesity is already associated with greater morbidity and poorer health-related quality of life than smoking, problem drinking or poverty. In contrast to conservative treatments, bariatric surgery has provided a means of treating the morbidly obese successfully, with sustained weight loss. Weight loss results in amelioration or cure of the co-morbidities. In addition, after bariatric surgery, most patients report improvement in psychosocial functioning and quality of life. In recent years, the demand for bariatric surgery had dramatically increased, because its benefits have become widely recognized. The aim of this study is to evaluate the predicting factors and their impact to detect success rates of bariatric surgeries.

Aim of the work

This study aim to evaluate the predicting factors and their impact on detecting success rates of bariatric surgeries.

Patients and Methods

In this retrospective study, all patients suspected to have postoperative complications and presenting to Alexandria University hospital from the start of May 2018 to end of April 2021 were included. Patients who underwent Roux-en-Y gastric bypass RYGB, laparoscopic mini-gastric bypass MGB, and laparoscopic sleeve gastrectomy LSG from a retrospective database were analyzed.

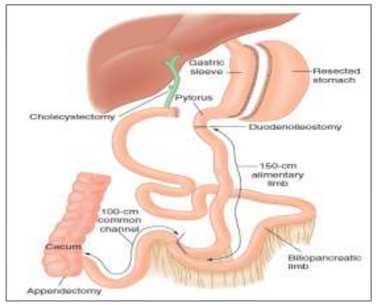

Figure 1: Diagram of a biliopancreatic diversion with duodenal switch

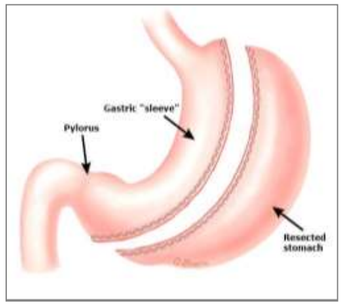

Figure 2: Sleeve gastrectomy

Results

In the present study, we adopt >=40% Excessive Weight Loss (EWL) at 18 months follow-up as a successful outcome.61/120 (50.83%) patients of the bariatric-metabolic surgeries studied achieved a loss of >=40% excess weight loss (EWL). The major challenge to the successful outcome of bariatric surgery is maintaining weight loss in the long term and minimizing weight regain.

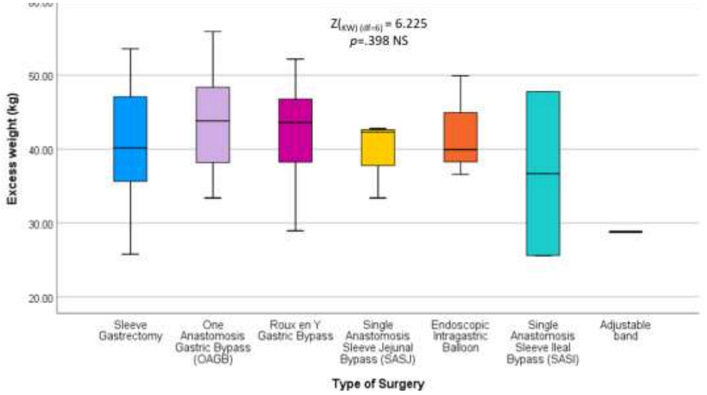

Figure 3: Box and whisker graph of **Preoperative excess weight** (kg) in the studied group, the thick line in the middle of the box represents the median, the box represents the inter-quartile range (from 25th to 75th percentiles), the whiskers represents the minimum and maximum

Table: Effect of bariatric surgery on different comorbidities

	Group (n=149)	
	n	% (95% CI)
Hypertension (n=149)	**70**	**46.98 (38.82%-55.30%)**
Postoperative hypertension remission (n=70)		
• No Improvement	14	20.00 (11.74%-31.61%)
• Partial remission	10	14.29 (7.43%-25.17%)
• Complete remission	46	65.71 (53.31%-76.38%)
Diabetes mellitus (n=149)	53	35.57 (28.02%-43.87%)
Postoperative DM remission (n=53)		
• No Change	14	26.42 (15.69%-40.58%)
• Partial remission	20	37.74 (25.12%-52.13%)
• Complete remission	19	35.85 (23.49%-50.25%)
Cardiac	4	2.68
DVT	2	1.37
OSA (n=149)	99	66..44 (58.18%-73.83%)
Complaint OSA Stage(n=99)		
• Mild	36	36.36 (27.10%-46.69%)
• Mild to moderate	11	11.11 (5.95%-19.41%)
• Moderate	29	29.29 (20.79%-39.42%)
• Moderate to severe	10	10.10 (5.22%-18.21%)
• Severe	13	13.13 (7.45%-21.76%)
Postoperative OSA remission (n=99)		
• Partial remission	16	16.16 (9.80%-25.22%)
• Complete remission	83	83.84 (74.78%-90.20%)
Comorbidities GERD (n=149)	86	57.72 (49.36%-65.68%)
Complaint GERD Stage(n=86)		
• Mild	36	41.86 (31.46%-52.99%)
• Mild to moderate	11	12.79 (6.86%-22.15%)
• Moderate	22	25.58 (17.05%-36.33%)
• Severe	17	19.77 (12.26%-30.04%)
Postoperative GERD	19	18.60 (11.32%-28.75%)
Postoperative GERD Stage		
• Mild	11	68.75 (41.48%-87.87%)
• Mild to moderate	5	31.25 (12.13%-58.52%)

Conclusion

Predictors of significant post-operative weight regain after bariatric surgery include indicators of baseline increased food urges, decreased well-being, and concerns over addictive behaviors. Post-operative self-monitoring behaviors are strongly associated with freedom from regain.