

# Comparative Study between Laparoscopic Adjustable Gastric Band & Laparoscopic Sleeve Gastrectomy for Surgical Management of Morbid Obesity

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## List of Abbreviations

<b>AgRP</b>	Agouti related peptide.
<b>BMI</b>	Body Mass Index
<b>CART</b>	cocaine and amphetamine related transcript.
<b>CCK</b>	Cholecystokinin.
<b>CVD</b>	Cardiovascular diseases.
<b>DEXA</b>	Dual Energy X-ray Absorptiometry.
<b>ECL</b>	Enterochromaffin-like cells.
<b>FTO gene</b>	Fat mass and obesity associated gene.
<b>GE</b>	Gastroesophageal.
<b>GERD</b>	Gastroesophageal reflux disease.
<b>GRP</b>	Glucagon releasing peptide.
<b>HDL</b>	High density lipoprotein.
<b>LAGB</b>	Laparoscopic adjustable gastric band.
<b>LDL</b>	Low density lipoprotein.
<b>LH</b>	Lateral hypothalamus.
<b>LSG</b>	Laparoscopic sleeve gastrectomy.
<b>NASH</b>	nonalcoholic steatohepatitis
<b>NPY</b>	neuropeptide Y.
<b>POMC</b>	pro-opiomelanocortin.

<b>PPY</b>	PeptideYY.
<b>RAS</b>	renin-angiotensin system.
<b>RYGB</b>	Roux en- Y gastric bypass.
<b>SEC</b>	Surface epithelial cells.
<b>TNF-<math>\alpha</math></b>	Tumor necrosis factor- $\alpha$ .
<b>VBG</b>	Vertical banded gastroplasty.
<b>VHT</b>	ventromedial hypothalamus.
<b>WAT</b>	White adipose tissues.
<b>WC</b>	Waist Circumference.
<b>WHO</b>	World Health Organization
<b>WHR</b>	Waist to hip ratio.



# ABSTRACT

*Background:* Obesity is considered one of the most common global health problems. There are a lot of bariatric surgeries to achieve the desirable weight loss. These operations are classified as either restrictive or malabsorptive, restrictive procedures limit intake by creating a small gastric reservoir with a narrow outlet to delay emptying, malabsorptive procedures bypass varying portions of the small intestine where nutrient absorption occurs. The restrictive procedures such as, laparoscopic adjustable gastric banding (LAGB) is characterized by being minimally invasive, total possibility of reversibility and good weight loss at long-term. On the other hand laparoscopic sleeve gastrectomy (LSG) is a common restrictive operation for obesity, with more invasiveness and a longer learning curve.

*Methods:* This comparative prospective and retrospective study was conducted in Kasr El Aini Hospital on 30 patients with morbid obesity with BMI of 40 Kg/m<sup>2</sup> or more, or BMI of 35 Kg/m<sup>2</sup> with obesity related comorbidities and all of them suffering 5 years or more of morbid obesity and had failed trials of conservative management and all of them are bulk eater. All patients with psychiatric impairment or those with BMI less than 40 Kg/m<sup>2</sup> without comorbidities or those who had previous abdominal surgery or other contraindication for laparoscopic surgery or uncontrolled very severe coexisting medical condition or sweet (high caloric fluid) eater will be excluded. Patients were randomly divided into 2 equal groups, A and B of 15 patients each. Group A undergo laparoscopic sleeve gastrectomy, while group B undergo laparoscopic adjustable banded gastroplasty. All patients were followed up regularly for 2 years and both groups were compared as regard the functional outcome and morbidity rate and duration of the procedure and effect of both procedures on obesity related comorbidities.



## **Aim of the work**

This study aims at comparing two of the most used bariatric surgical procedures namely laparoscopic adjustable gastric band and laparoscopic sleeve gastrectomy as regard techniques of the procedures, patient safety, morbidity rate and effect of both procedures on excess weight loss and on obesity related comorbidities.



## Objectives

1. To compare both procedures as regard the functional outcome on the rate of excessive weight loss and on obesity related comorbidities.
2. To compare both procedures as regard morbidity rate of both procedures.
3. To compare both procedures as regard the cost, technique and simplicity of the procedure, patient safety and length of hospital stay.
4. To put clear indication on which patient with morbid obesity is suitable for either laparoscopic adjustable gastric band or laparoscopic sleeve gastrectomy.