



ELSEVIER

Surgery for Obesity and Related Diseases ■ (2014) 00–00

SURGERY FOR OBESITY
AND RELATED DISEASES

Original article

Long-term outcomes of laparoscopic sleeve gastrectomy as a primary bariatric procedure

Camilo Boza, M.D.^{*}, David Daroch, M.D., Diego Barros, M.D., Felipe León, M.D.,
Ricardo Funke, M.D., Fernando Crovari, M.D.*Department of Digestive Surgery, School of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile*

Received December 5, 2013; accepted March 26, 2014

Abstract

Background: Laparoscopic sleeve gastrectomy (LSG) has been established as a reliable bariatric procedure, but questions have emerged regarding its long-term results. Our aim is to report the long-term outcomes of LSG as a primary bariatric procedure.

Methods: Retrospective analysis of patients submitted to LSG between 2005 and 2007 in our institution. Long-term outcomes at 5 years were analyzed in terms of body mass index (BMI), excess weight loss (EWL) and co-morbidities resolution. Surgical success was defined as % EWL > 50%. Also, we compared long-term results according to preoperative BMI, using Mann-Whitney test.

Results: A total of 161 LSG were analyzed, and 114 patients (70.8%) were women. The median age was 36 years old (range 16–65), median preoperative BMI was 34.9 kg/m² (interquartile range [IQR], 33.3–37.5). A total of 112 patients (70%) completed 5 years of follow-up. At the fifth year, median BMI and %EWL was 28.5 kg/m² (IQR: 25.8–31.9) and 62.9% (IQR: 45.3–89.6), respectively, with a surgical success of 73.2% of followed patients. According to preoperative BMI, surgical success was achieved in 80% of patients with BMI < 35 kg/m², 75% of BMI 35–40 kg/m², and 52.6% of BMI > 40 kg/m², with significant lower %EWL in patients with BMI > 40 kg/m² ($P = .001$ and $.004$). Dyslipidemia and insulin resistance resolution was 80.7% and 84.7%, respectively. A total of 26.7% of patients reported new-onset gastroesophageal reflux symptoms at 5 years.

Conclusion: LSG as a primary procedure is a reliable surgery. We observed positive long-term outcomes of %EWL and co-morbidities resolution. In our series, best results are seen in patients with preoperative BMI < 40 kg/m². (Surg Obes Relat Dis 2014;■:00–00.) © 2014 Published by Elsevier Inc. on behalf of American Society for Metabolic and Bariatric Surgery.

Keywords:

Laparoscopic sleeve gastrectomy; Bariatric surgery; Long-term results

Bariatric surgery has proven to be an effective treatment for obesity and the only intervention with stable long-term outcomes. Over the last years, laparoscopic sleeve gastrectomy (LSG) has been established as a reliable bariatric procedure with general acceptance among surgeons due to favorable

outcomes reported regarding weight loss, resolution of co-morbidities and postoperative complications [1].

Different publications reporting short- and mid-term outcomes have shown the effectiveness of LSG as a primary bariatric procedure [2,3], but questions have emerged regarding its long-term results [4,5]. Because it is a relative novel bariatric procedure, there still are a limited number of long-term studies and follow-up reported vary considerably.

The aim of this study is to report the long-term outcomes of patients who underwent a LSG as a primary bariatric

^{*}Correspondence: Camilo Boza, M.D., Department of Digestive Surgery, School of Medicine, Pontificia Universidad Católica de Chile. Marcoleta 350. Santiago, Chile.

E-mail: bozauc@mac.com

procedure in our institution and have completed at least 5 years of follow-up.

Methods

Retrospective analysis of the electronic database of the Bariatric Surgery Program at the Clinical Hospital of the Pontificia Universidad Católica de Chile, between December 2005 and June 2007.

We included all patients that were submitted to a LSG as a primary bariatric procedure during this period. The database was complemented by electronic medical records, laboratory-tests results, and a standardized telephonic survey during follow-up. Patients with Revisional surgery and pregnancy during the follow-up period were excluded from the analysis. Written informed consent was obtained from all patients.

Data analyzed included patient's demographic, co-morbidities, prior surgeries, preoperative and postoperative body mass index (BMI), excess weight loss (EWL), perioperative results, complications, and long-term outcomes. Diagnosis of prior co-morbidities was according to specific criteria: arterial hypertension was defined by World Health Organization criteria. Dyslipidemia was defined according ATP III criteria. Hypothyroidism and insulin resistance was defined according to the American Association of Clinical Endocrinologists. Diagnosis of type 2 diabetes mellitus (T2DM) was performed according to the criteria established by the American Diabetes Association. The diagnosis of gastroesophageal reflux disease (GERD) during follow-up was made clinically with a GERD symptoms questionnaire and by endoscopy in selected patients in whom esophagitis or other complications were suspected.

Surgical success was defined as a percentage excess weight loss (%EWL) > 50% and co-morbidities resolution was defined as absence of medication due to adequate medical control at 5 years.

Also, we compared the long-term results of %EWL according to preoperative BMI between 3 groups of patients: BMI < 35 kg/m², BMI: 35–40 kg/m², and BMI > 40 kg/m².

Surgical technique

In our center, LSG is performed with a 5-trocar technique that has been previously reported [6].

In this series, gastric greater curvature was dissected 6 cm proximal to the pylorus, preserving the antrum. Short gastric vessels were sectioned using the harmonic scalpel (Ethicon Endosurgery, Cincinnati, OH, USA) up to the gastroesophageal junction. A 60-Fr bougie was inserted transorally and then 4 to 5 60-mm laparoscopic staplers were fired adjacent to bougie to transect the stomach (Echelon Endopath stapler, Ethicon Endosurgery, Cincinnati, OH, USA). Green, gold, and blue cartridges were used depending on the thickness of the stomach. The staple line

was reinforced with a running absorbable suture. The resected stomach was removed in a plastic bag through the left flank trocar.

Statistical analysis

SPSS version 21.0 (Chicago, IL, USA) was used to statistical analysis. The results are reported as median with their range or interquartiles ranges (IQR).

Comparison of %EWL according to preoperative BMI was performed with U-Mann-Whitney test. Confidence intervals were established for an alpha value of 95%.

Results

Between December 2005 and June 2007, 161 patients were submitted to a LSG as a primary bariatric procedure in our institution. One hundred and fourteen patients (70.8%) were women. Median age was 36 years old (range, 16–65) and median preoperative BMI was 34.9 kg/m² (IQR 33.3–37.5). Preoperative co-morbidities of the series were insulin resistance: 87 patients (54%), dyslipidemia: 87 patients (54%), arterial hypertension: 38 patients (23.6%), hypothyroidism: 22 patients (13.6%), and T2DM: 8 patients (4.9%).

In regard to surgical data, median operative time was 82.5 minutes (range, 45–360), with no conversions to open surgery. Simultaneous cholecystectomy was performed in 10 patients (6.2%) due to cholelithiasis. Median in-hospital stay was 3 days (range, 2–16).

Six patients (3.7%) developed postoperative complications; 2 patients (1.2%) had surgical wound infection, 1 patient (0.6%) developed a portomesenteric thrombosis requiring anticoagulation, and 1 patient (0.6%) presented a mild hemoperitoneum managed without surgery. Two patients required a reoperation, 1 due to staple-line leak requiring a laparoscopic drainage on postoperative day 2 and the other due to antral stenosis, who was converted to laparoscopic Roux-en-Y gastric bypass (LRYGB) 1 month after surgery. No other reoperations and no mortality were reported in our series.

Long-term outcomes

Four patients (2.5%) required revisional surgery after the LSG. As was mentioned before, 1 patient was converted to LRYGB due to antral stenosis and the remaining 3 patients underwent a second bariatric procedure due to weight regain: 2 patients were submitted to a LRYGB at 3 and 5 years after LSG, respectively, and 1 patient underwent a duodenal-jejunal bypass liner implantation 3 years after LSG.

The percentage of follow-up was 88% (141 patients) at 1 year, 78% (126 patients) at 3 years, 70% (112 patients) at 5 years, and 37% (59 patients) at 6 years. Median and mean follow-up were 60 (range, 6–72) months and 54 ± 19 months, respectively. The lowest overall median BMI was 26.4 kg/m² and it was achieved at a median of 12 months

Download English Version:

<https://daneshyari.com/en/article/3319784>

Download Persian Version:

<https://daneshyari.com/article/3319784>

[Daneshyari.com](https://daneshyari.com)