The Use of Predictive Markers for the Development of a Model to Predict Lowest Quartile Weight Loss Following Roux-en-Y Gastric Bypass

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Background: The Roux-en-Y Gastric Bypass (RYGB) has been one of the most popular surgeries in the USA for years. While many models have been made to try to predict the factors that affect weight loss, these factors are still highly debated.

Objective: To use multivariate analysis to investigate the factors that predict performance of XYG bypass.

Setting: Private Practice, United States.

Methods: 110 of the out of 344 patients who received a RYGB at a single institution between January 2010 and April 2014 were included in this study. Data was collected retrospectively. Patients were excluded if they had less than 1 year follow up and at least three follow up points could be calculated with a rise of 0.95. All patients were out beyond surgery, while 40 were completely lost to follow up, 104 at 1 month, 138 at 3 months, 188 at 6 months, and 225 at one year. 6 patients were not included because they did not meet the criteria of the study. Patients were divided into quartiles based on percentage excess weight loss (EWL) at one year. Multivariate analysis was performed to determine the significant factors that influence patients in the first quartile of weight loss (17-40% EWL).

Results: Only males with a Body Mass Index (BMI) above 44 and females with a BMI above 64 were found to be predictive of patients being in the first quartile. Our model has Positive and Negative predictor values of 66% and 80% respectively with sensitivity and specificity of 25% and 95% respectively.

Conclusion: Due to the lack of weight loss male patients with a BMI over 44 and female patients with a BMI over 64 will most likely end up in the bottom quartile. This information should be discussed with patients when deciding on surgery.

Comparison of Estimated Weight Loose in Sleeve Gastrectomy and Roux-en-Y Gastric By-pass

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Objectives: Estimated weight loss (EWL) is an important parameter in bariatric surgery indicating the postoperative success in weight loss. We aimed to compare the EWL in sleeve gastrectomy and roux-en-y gastric by-pass.

Materials and Methods: During a one-year period (2013) data of patients who underwent bariatric surgery in our clinic were recorded prospectively including demographical data, operation type, preoperative Body Mass Index (BMI) and postoperative In-1st and 12th month BMI. The patients were analyzed in two groups: GroupA (n = 30): patients who underwent sleeve gastrectomy and GroupB (n = 30): patients who underwent Roux-en-Y Gastric By-pass.

Results: There was no statistically significant difference regarding the patients' demographies and perioperative complications rates. Body Mass Index (BMI) was 51,3 ± 8,5 in GroupA and 56,1 ± 7,3 (p = 0,024).

Conclusion: Although the Roux-en-Y Gastric By-pass is a more invasive procedure compared to sleeve gastrectomy and has its own hazards related to the operational procedures, this study indicated that Roux-en-Y Gastric By-pass is more successful in EWL compared to sleeve gastrectomy. However, sleeve gastrectomy is a more simple procedure compared to Roux-en-Y Gastric By-pass and with mean 80,9% EWL sleeve gastrectomy can be chosen alternatively to Roux-en-Y Gastric By-pass, which has a 89,2% EWL.

A VA-Based Multidisciplinary Clinic Improves Follow-Up After Bariatric Surgery

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Introduction: Outpatient follow-up after bariatric surgery is associated with improved outcomes and patient satisfaction. At the Veterans Affairs Medical Center (VAMC) we have established a unique multidisciplinary clinic. We sought to examine whether a 1-year postoperative follow-up would increase as a result.

Methods: A retrospective review of a prospective database of patients who underwent bariatric surgery or sleeve gastrectomy between 2003 and August 2014. A multidisciplinary clinic which includes a patient assessment by a surgeon, bariatrician, dietitian, physical therapist, and psychologist at each visit, was established at our VAMC in 2008. Significant differences were determined using a t-test.

Results: Of 221 patients who underwent bariatric surgery at our VAMC, 97 (44%) were followed before institution of a multidisciplinary clinic (PRE), and 124 (56%) were followed after institution of a multidisciplinary clinic (POST). Most were male (78%), and mean pre-operative BMI was similar in both groups (47 kg/m² and 46 kg/m², respectively). The rate of follow-up at 1 year after surgery was significantly higher in the POST group, compared to the PRE group (85% and 76%, respectively; p = 0.057). Despite the fact that more patients in the PRE group underwent bariatric bypass (96%), while more patients in the POST group underwent sleeve gastrectomy (58%), the remission of diabetes (66% vs. 69%, p = 0.86) and resolution of hypertension (42% vs. 47%, p = 0.55) were similar in both groups. The decrease in BMI experienced in the first post-operative year was higher in the PRE compared with the POST group (BMI of 14 vs. 11 kg/m², respectively, p < 0.01).

Conclusion: A dedicated multidisciplinary weight loss clinic leads to better short-term follow-up after bariatric surgery. As the proportion of sleeve gastrectomy operations increases in the veteran population, a VA-based multidisciplinary clinic may prove effective in maintaining postoperative outcomes similar to gastric bypass.

Perioperative Outcomes of Laparoscopic Sleeve Gastrectomy Versus Laparoscopic Roux-en-Y Gastric Bypass in the Superobese Population

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Introduction: Among patients undergoing bariatric surgery, the superobese patients (BMI > 50) are considered more challenging with higher morbidity and mortality. Few studies have been published regarding perioperative outcomes of bariatric surgery in this particular patient group, and even fewer studies have included a direct comparison of clinical outcomes between the traditional laparoscopic Roux-en-Y gastric bypass (LRYGB) and laparoscopic sleeve gastrectomy (LSG). Considering the increasing use of LSG in this patient population, a meta-analysis of the existing comparative data is useful for determining the appropriate procedural choices.

Methods: A systematic review was conducted to identify relevant studies from PubMed from 2010–2015 with comparative data on perioperative outcomes of LRYGB versus LSG in patients with BMI > 50. The primary outcomes were percentage excess weight loss (EWL) at 12 months, operative time, length of stay, perioperative complications, and mortality. Results are expressed as standard difference in means with standard error. Statistical analysis was done using random-effects meta-analysis to compare the mean value of the two groups (Comprehensive Meta Analysis Version 3.3.09 software; Biostat Inc., Englewood, NJ).

Results: Four retrospective studies were quantitatively assessed and included for meta-analysis. Among the four studies, 238 were LSG patients and 422 were LRYGB patients. LSG results in a significantly lower EWL (49.5% ± 23.4; p = 0.01) and decreased operative time (4.300 ± 0.176; p = 0.02) when compared to LRYGB. There were no differences in the length of stay (2.066 ± 0.211, p = 0.055), rate of complications (0.056 ± 0.21, p = 0.590), and mortality (0.002 ± 0.253, p = 0.990) when comparing these two procedures.

Conclusion: LSG is safe in the superobese population and presents similar outcomes to LRYGB. The EWL seen at 12 months is increased in the LRYGB group.