

## P443

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

Samuel Cottam, Austin Cottam, Daniel Cottam, MD, Amit K Surve, MD, Hinali Zaveri, MD, Christina Richards, Bariatric Medicine Institute

**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 investigate the factors that affect weight loss, these factors are still highly debated.

**Objective:** To use multivariate analysis to investigate the factors that predicts performance of RYGB patients.

**Setting:** Private Practice, United States

**Methods:** 110 out of 344 patients who received a RYGB at a single institution between Jan 2010 and April 2014 were included in this study. Data was collected retrospectively. Patients were included if they had greater than 1 year follow up with at least three follow up points and could be modeled with  $R^2 > 0.95$ . All patients were one year 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. 9 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 being in the first quartile of weight loss (17–60 % %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 29 % and 95 % respectively.

**Conclusions:** 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 a procedure.

## P444

### A Va-Based Multidisciplinary Clinic Improves Follow-Up After Bariatric Surgery

Nalani Grace, MD, Eric Kubat, MD, Dan Eisenberg, MD, MS, VA Palo Alto

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

**Methods:** A retrospective review of a prospective database of patients who underwent gastric bypass 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/m<sup>2</sup> and 46 kg/m<sup>2</sup>, 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;  $p = 0.037$ ). Despite the fact that most patients in the PRE group underwent gastric bypass (96 %), while most patients in the POST group underwent sleeve gastrectomy (88 %), the remission of diabetes (66 % vs. 69 %,  $p = 0.86$ ) and remission 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 (DBMI = 14 vs. 11 kg/m<sup>2</sup>, 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.

## P445

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

Mehmet Mihmanli, Prof, Riza Gurhan Isil, PhD, Ufuk Oguz Idiz, PhD, Uygur Demir, PhD, Cemal Kaya, PhD, Canan Tulay Isil, PhD, Pinar Sayin, PhD, Yuksel Altuntas, Prof, Hamidiye Sisli Btfal E.A.H.

**Objectives:** Estimated weight loose (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 demographic data, operation type, preoperative Body Mass Index (BMI) and postoperative 1st-3rd-6th and 12th month BMI. The patients were analyzed in two groups; GroupS (n = 30): patients who underwent sleeve gastrectomy and GroupR (n = 30): patients who underwent Roux-En-Y Gastric By-Pass.

**Results:** There was no statistically significant difference regarding the patients' demographics and perioperative complication rates. Body Mass Index (BMI) was 51,3 +/-8,5 in GroupS and 56,1 +/-7,3 ( $p = 0.024$ ).

**Conclusion:** Albeit Roux-En-Y Gastric By-Pass is a more invasive procedure compared to sleeve gastrectomy and has its own handicaps related to the operational procedure, 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 choosen alternatively to Roux-En-Y Gastric By-Pass, which has a 89,2 % EWL.

## P446

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

Davis Waller<sup>1</sup>, Angel Farinas, MD<sup>2</sup>, Christian Cruz Pico, MD<sup>2</sup>, Angelina Postoev, MD<sup>2</sup>, Christopher Ibikunle, MD<sup>2</sup>, Aliu Sanni, MD<sup>2</sup>, <sup>1</sup>MCG/UGA Medical Partnership, <sup>2</sup>Georgia Surgicare

**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 offer 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 choice.

**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 3.3.070 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 ( $-0.576 \pm 0.234$ ,  $p = 0.01$ ) and decreased operative time ( $-0.590 \pm 0.176$ ,  $p = 0.02$ ) when compared to LRYGB. There were no difference in the length of stay ( $-0.206 \pm 0.211$ ,  $p = 0.055$ ), rate of complications ( $0.056 \pm 0.21$ ,  $p = 0.599$ ), or mortality ( $-0.002 \pm 0.255$ ,  $p = 0.990$ ) when comparing these two procedures.

**Conclusions:** LSG is safe in the superobese patients as it presents similar outcomes to LRYGB. The %EWL seen at 12 months is increased in the LRYGB group.