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**Diabetes Remission Following Gastric Bypass: Does Diarem Stand the Test of Time?**

J. Hunter Mehaffey, MD, Matthew G Mullen, MD, Rachel L Mehaffey, MD, Florence E Turrentine, PhD, RN, Steven K Malin, PhD, Bruce Schirmer, MD, Peter T Hallowell, MD, University of Virginia

**Objective(s):** Amelioration of type 2 diabetes mellitus (T2DM) is well-known to occur after Roux-en-Y Gastric Bypass (RYGB). Although the DiAREM score is a novel method for predicting T2DM remission up to 1-year post-RYGB, no data exist for long-term validity. Therefore, we sought to determine the utility of this score as long-term RYGB effectiveness for T2DM resolution at 2 and 10 years respectively following RYGB. **Methods:** T2DM patients (Age: 48, BMI: 46, HbA1c: 8.1) undergoing RYGB at the University of Virginia between 2004–2006 (n = 42) and 2012–2014 (n = 59) were evaluated prospectively to assess pre-operative DiAREM score, defined from insulin use, age, HbA1c and type of antidiabetic medication. T2DM partial remission status was based on the American Diabetes Association guidelines. Chi square test was used to compare patient's T2DM status to their DiAREM probability of remission. **Results:** Among RYGB patients with 2-year post-operative data, 2 were lost (n = 1 no follow-up and n = 1 died) resulting in 57 patients for analysis. For the 10-year post-operative data, 11 were lost (n = 6 no follow up and n = 5 died) thereby resulting in only 31 patients for analysis. Table 1 displays patients stratified by preoperative DiAREM scores, with the probability of T2DM remission as well as the actual percent remission at 2- and 10-years. There was no statistical difference in the DiAREM predicted compared with actual T2DM remission rate at either time-point (all p > 0.05). **Conclusion:** Pre-operative DiAREM scores are a good tool for predicting both short- and long-term T2DM remission following RYGB. This study represents the first evaluation of this model in T2DM patients up to 10 years after bariatric surgery.

**Table 1** Pre-operative DiAREM Score Validation of T2DM Remission at 2- and 10-years

DiAREM score	Avg probability of remission (%)	2-Year remission (%)	2-Year p-value	10-year Remission (%)	10-Year p-value
0–2	94	100	0.61	100	0.72
3–7	76	94	0.08	83	0.57
8–12	36	47	0.38	43	0.72
13–17	22	20	0.92	33	0.64
18–22	9	15	0.40	14	0.64

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**Safety and Efficacy of Gastric Bypass Versus Sleeve Gastrectomy in Patients 65 and Older**

Lisandro Montorfano, MD, Federico Perez Quirante, MD, Alex Ordonez, MD, Nisha Dhanabalsamy, MD, Rammohan Rajmohan, MD, Emanuele Lo Menzo, MD, PhD, FACS, FASMB, Samuel Szomstein, MD, FACS, FASMB, Raul J Rosenthal, MD, FACS, FASMB, Cleveland Clinic Florida

**Introduction:** The aim of our study was to compare the safety and efficacy of Laparoscopic Roux-en-Y gastric bypass (LRYGB) and Sleeve Gastrectomy (LSG) in patients aged ≥ 65 years. **Material and Methods:** A retrospective review of a prospectively collected database was performed. All the patients with ages ≥ 65 who underwent LRYGB or LSG between 2010 and 2014 were analyzed. Demographics, preoperative body mass index (BMI), postoperative complications, postoperative BMI and readmissions were recorded and compared between procedures. **Results:** A total of 115 patients were identified. Of these patients, seventy five (65.2 %) underwent LSG and forty (34.7 %) underwent LRYGB. The mean age of the LSG group was 68 years old (range 66–72) and the mean age of the LRYGB group was 67 years old (range 66–69) (p = 0.025). In the LSG group 38 were women (51 %) and 37 were men (49 %). In the LRYGB group 25 were women (62 %) and 15 were men (38 %). The mean preoperative weight and body mass index (BMI) was 116 kg (range 104–127 Kg) and 40 kg/m<sup>2</sup> (range 38–45) for the LSG group and 119 kg (range 105–130 Kg) and 41 kg/m<sup>2</sup> (range 37–46) for the LRYGB group. When comparing both groups we did not find a significant difference regarding preoperative weight (p = 0.71) and preoperative BMI (p = 0.76). The overall incidence of postoperative complications was 32.5 % (13 patients) for the RYGB group and 9.1 % (7 patients) for the LSG group. The incidence of postoperative new marginal ulcers (p < 0.001) and de novo regurgitation (p = 0.031) was higher for the LRYGB group (Table 1). Regarding readmissions, 4 patients (10 %) that underwent LRYGB and 7 patients (9 %) that underwent LSG were readmitted at least one time. (p = 0.91) **Conclusion:** According to our data both procedures have a similar efficacy and the same rate of readmissions. On the other hand, our study showed that LRYGB has more complications than LSG in the elderly. We conclude that Sleeve Gastrectomy might be a safer choice in patient's ≥ 65 years.

**Table 1** Complications among procedures

	N	LRYGB (n=40)	LSG (n=75)	Test statistic
Wound infection	115	1 (2%)	2 (3%)	p=0.957
Anastomotic stricture	115	1 (2%)	0 (0%)	p=0.169
Small bowel obstruction	115	2 (5%)	1 (1%)	p=0.240
New marginal ulcers	115	10 (25%)	0 (0%)	p<0.001
Incisional hernias	115	1 (2%)	2 (3%)	p=0.957
Regurgitation	115	4 (10%)	1 (1%)	p=0.031
Hiatal hernias	115	0 (0%)	1 (1%)	p=0.463

**Table 2**

	N	LSG (n=75)	LRYGB (n=40)	Test statistic
BMI at week 2	99	33.27 ± 3.27	33.27 ± 3.27	F <sub>(1,96)</sub> = 0.002, P = 0.959
BMI at month 2	36	34.28 ± 3.17	34.28 ± 3.17	F <sub>(1,34)</sub> = 0.02, P = 0.876
BMI at month 6	97	34.36 ± 3.36	34.36 ± 3.36	F <sub>(1,94)</sub> = 0.02, P = 0.876
BMI at month 12	31	34.34 ± 3.25	34.34 ± 3.25	F <sub>(1,28)</sub> = 0.02, P = 0.876
BMI at year 1	74	34.27 ± 3.21	34.27 ± 3.21	F <sub>(1,70)</sub> = 0.02, P = 0.876
BMI at year 1.5	42	34.39 ± 3.23	34.39 ± 3.23	F <sub>(1,38)</sub> = 0.02, P = 0.876
BMI at year 2	36	34.32 ± 3.22	34.32 ± 3.22	F <sub>(1,32)</sub> = 0.02, P = 0.876
BMI at year 3	30	34.34 ± 3.24	34.34 ± 3.24	F <sub>(1,26)</sub> = 0.02, P = 0.876
BMI at year 4	22	34.36 ± 3.25	34.36 ± 3.25	F <sub>(1,18)</sub> = 0.02, P = 0.876

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**Obalon Gastric Balloon: Kuwait Experience**

Yousef Almuhanna<sup>1</sup>, Fahad Alasfar, Prof<sup>2</sup>, Fatemah Alotaibi<sup>2</sup>, <sup>1</sup>KIMS, <sup>2</sup>Kuwait University

**Background:** The era of bariatric surgery has been dynamically evolving from the 1950s till day. Considering the possible complications that patients may face postoperatively, less invasive options were brought into the horizon. One of these options is the obalon gastric balloon, in which patients swallow the obalon gastric balloon capsule and then it is filled with 250 cc of volume. It is designed to trigger satiety by partially filling the stomach and therefore, over 12 weeks period, induce weight loss. **Objective:** To assess the benefit of obalon gastric balloon for those who seek noninvasive solutions for weight loss. **Methods:** A prospective study of 72 patients who presented to our clinic seeking endoscopic management for obesity. Most of the patients were already aware of the obalon gastric balloon. Data was collected in a period of 10 months: November 2014 till September 2015. Consent was taken from our patients that they will be involved in the study. **Results:** Patients were studied over a period of 10 months. The median age of patients was 33 (13–59) and 73 % were females. Patients' BMI was categorized into overweight (25–30 kg/m<sup>2</sup>), class I obesity (30–34.9 kg/m<sup>2</sup>), class II obesity (35–39.9 kg/m<sup>2</sup>), and class III obesity (≥ 40 kg/m<sup>2</sup>). The obalon gastric balloon has been administered and patients were followed up for an average period of 12 months; patients' weight was taken after that period and the percentage of excess weight loss median was 19.4 % (–6.4 %–47.2 %). Percentage of excess weight loss peaked among class I obesity patients (p = 0.003). **Conclusion:** The obalon gastric balloon can be an option for those who seek weight reduction solutions. Weight loss was observed among all classes of obesity, but peaked among those in class I obesity. Although the study was limited by the small sample size (72 patients), and the fact that some of them failed to show for follow-up, we strongly believe that the obalon gastric balloon has a very big potential in a country where 61.2 % of its adults are overweight. The study will continue until a much bigger sample size can be obtained.

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**The Use of Predictive Markers for the Development of A Model to Predict Lowest Quartile Weight Loss Following Vertical Sleeve Gastrectomy**

Samuel Cottam<sup>1</sup>, Daniel Cottam, MD<sup>1</sup>, Mitchell Roslin<sup>2</sup>, Hinali Zaveri, MD<sup>1</sup>, Amit K Surve, MD<sup>1</sup>, Christina Richards<sup>1</sup>, Walter Medlin<sup>1</sup>, Austin Cottam<sup>1</sup>, <sup>1</sup>Bariatric Medicine Institute, <sup>2</sup>Lenox Hill Hospital

**Introduction:** Although average percent excess weight loss data is commonly discussed preoperatively to guide patient expectations, there is a wide range and variation following Vertical Sleeve Gastrectomy (VSG). Unfortunately, there are relatively few predictors that allow for individual guidance of weight loss. This analysis' purpose is to compare patients percent weight loss and determine if any statistically significant variables are predictive of weight loss and develop a model that predicts weight loss underperformance. **Method:** 124 Patients who underwent the VSG had data points that were adequate for analysis. These patients underwent surgery between October 2008 and April 2014. Data was gathered. Non-linear regression was performed in order to interpolate patient weights at one year. Multivariate analysis was used to find factors that effected weight loss. Then using that data a model was constructed to predict weight loss performance in any practice. **Results:** Patients were divided in %EWL quartiles. Multiple logistic regression was used to find that Diabetes and Preoperative BMI were influencing factors in %EWL at one year. Using this data our model had Positive and Negative predictor values of 86 % and 87 % respectively. **Conclusion:** Patients with a BMI greater than 54 or patients with Type 2 Diabetes Mellitus (DM) and a BMI greater than 43 are more likely to be in the bottom quarter. This information should be discussed and consideration given to performing a more aggressive procedure when a patient's objective is to have a BMI below the obesity threshold of 30.