

Long-Term Outcomes of Roux-en-Y Gastric Bypass Surgery in a Remote Northern Bariatric Centre of Excellence

Erika Allard-Ihala MD, Andrew Smith MD, FRCSC, Scott Cassie MD, FRCSC

Background

The Bariatric Centre of Excellence opened five years ago in the remote Northern Ontario city of Thunder Bay to mitigate the rate and complications of obesity. Prior to this program, patients would travel long distances to have surgery with very disjointed follow up. The initial study assessing the short-term outcomes of this program are consistent with the standards of the Ontario Bariatric Network. Assessment of the long-term outcomes was an essential component to continuing the development and knowledge of this unique northern and rural bariatric program.

Objective

Our aim is to examine the long-term outcomes of this first cohort of patients to undergo Roux-en-y gastric bypass in a remote Northern community.

Methods

An observational retrospective chart review was completed for all patients taken to the operating room for a Roux-en-Y gastric bypass between June 2014 and December 2016. Primary outcomes assessed included percent total weight loss at 6, 12, and 18 months. Secondary outcomes data were also collected including postoperative obesity associated comorbidities and long-term complications. Patient characteristics were gathered in a previous study and included preoperative BMI, age at time of surgery, sex, and presence of obesity associated comorbidities. Categorical variables were summarized using number and percentage whereas continuous variables were summarized using mean and standard deviation.

Results

During the study period a total of 167 patients were taken to the OR for gastric bypass with Roux-en-Y reconstruction. Patients were predominantly female (88.6%), with a mean patient age of 45.2 ±11.1 years. The mean pre-operative BMI for females was 45.8±5.7kg/m² (range 36.3-65.6) and for males was 47.8±6.1kg/m² (range 39.9-56.4). Four procedures were aborted without completion. Two procedures were aborted due to unexpected hepatic and pelvic pathology at the time of surgery whereas the other two procedures were due to perioperative cardiac arrhythmias. The percent total weight loss for females at 6, 12, 18 months was 22.9%, 32.7% and 30.1%, respectively. At 6, 12, and 18 months, the percent total weight loss for males was 21.7%, 26.4% and 23.8%, respectively. The percent total weight loss is depicted in Figure 1. There was a significant reduction in obesity associated medical comorbidities, as depicted in Figure 2. The postoperative complications are recorded in Table 1 below. Fourteen patients developed a marginal ulcer. Three of the 14 patients who developed an ulcer were smoking tobacco and another was using NSAID products.

Figure 1. Percent excess weight loss in postoperative period.

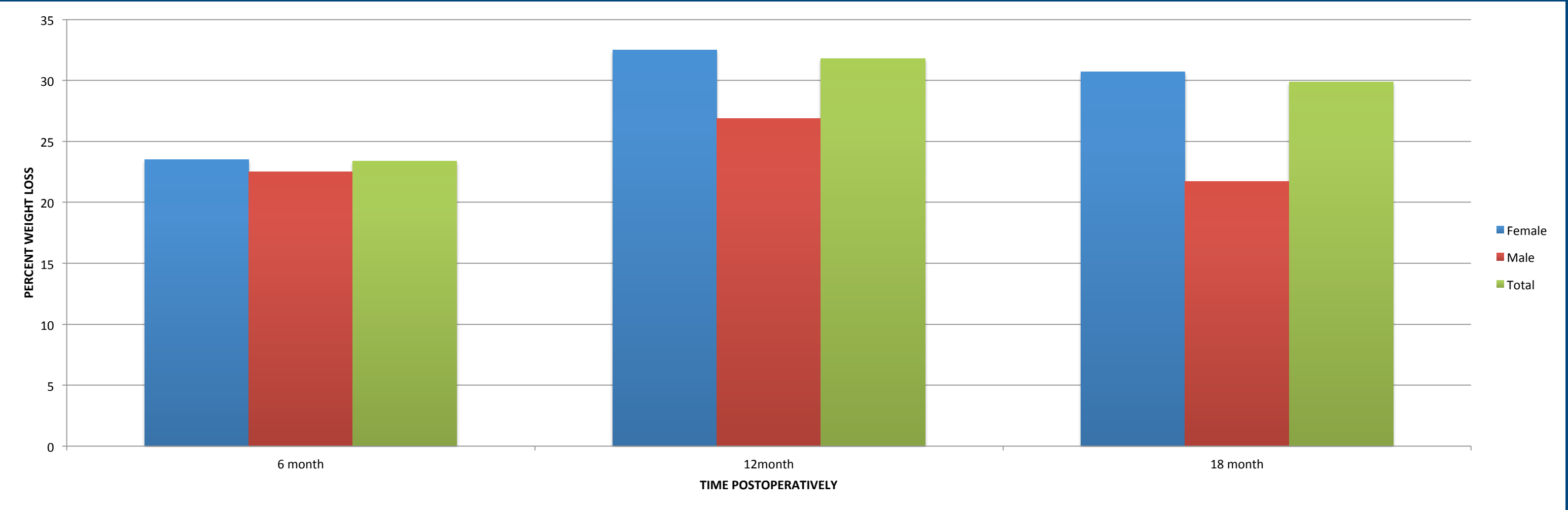
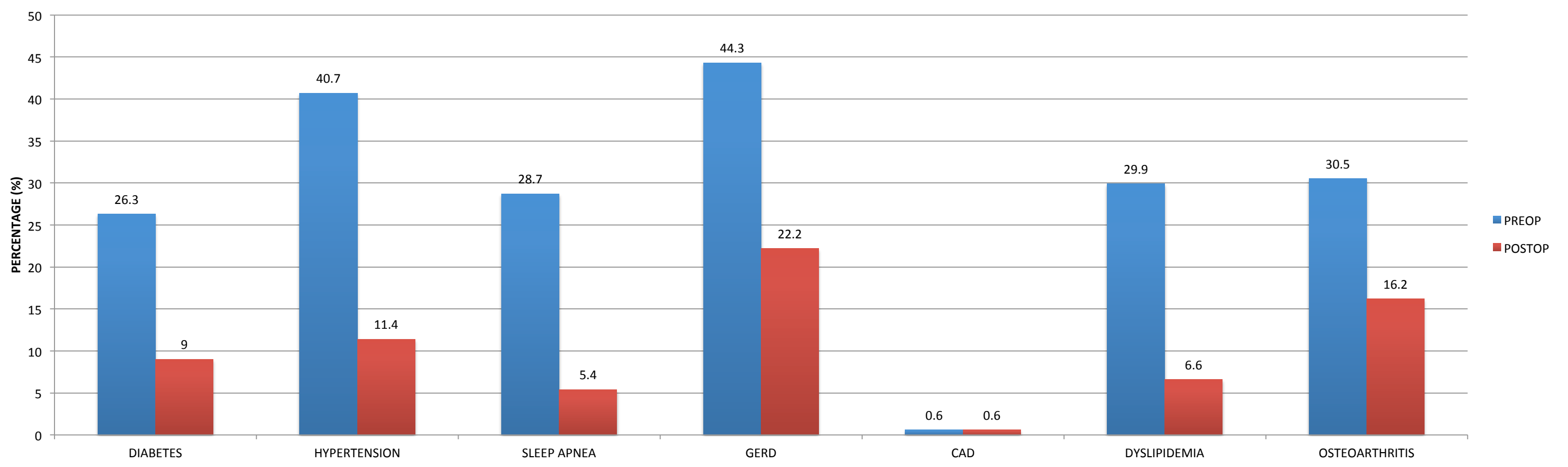


Table 1. Postoperative complications

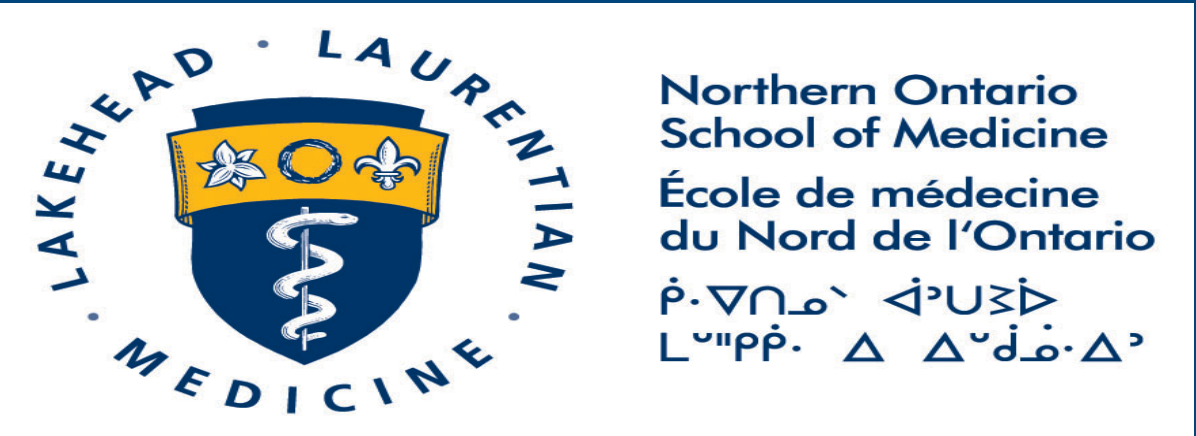
Secondary Outcomes			
Marginal ulcer		14 (8.38%)	
	Smoking	3	(1.8%)
	NSAID use	1	(0.6%)
Internal hernia		3	(1.8%)
Mortality			0
No development of enterostomal stricture, bowel obstruction, dumping syndrome MI, or VTE.			

Figure 2. Comparison of pre-operative vs. postoperative obesity associated comorbidities.



Conclusion

Based on the long-term results, there has been sustained weight loss in the RYGB group with significant reduction in obesity-associated comorbidities. The rate of complications was similar to that seen in the literature. The Bariatric Centre of Excellence in Thunder Bay, Ontario meets both the short and long-term standards of care within our unique, northern environment.



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