



MedStar Health

Comparing Outcome in Gastric Sleeve with Bougie versus Standard Clamp: a Single Surgeon’s Experience

Table 4. Wound Outcome Categorized by BMI

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Objective and Hypothesis

- There is no retrospective study that compares outcomes such as GERD symptoms in gastric sleeve with standard clamp versus bougie.
- Our study aims to examine post-op GERD symptoms among other outcomes in these two groups of surgical patients.

Introduction

- Obesity is a known risk factor for GERD; it is reported that up to 50% of obese patients suffer from GERD.
- Bariatric surgery is proven to be effective in sustaining long term weight loss, which is associated with resolution of obesity related comorbidities with the exception of GERD.
- There has been contrasting studies on GERD symptoms after sleeve gastrectomies. Some have shown de novo GERD after surgery while others found that patients have differing reports of GERD post-surgery.
- GERD symptoms is associated with patient satisfaction at one year post-op

Methods

- Retrospective analysis of clinical database containing randomized selection of gastric sleeve procedures between July 2016 to August 2019.
- One hundred gastric sleeves done with bougie and one hundred gastric sleeves done with the standard clamps were randomly selected.
- Demographics, medical comorbidities, LOS, and post-op complications were obtained through chart review.
- Post-op weight and GERD symptoms at 2 weeks, 6 weeks and 12 weeks were acquired through clinic documentations.
- Primary end points include percentage weight loss during post-op period, GERD symptoms.
- Chi squared test, McNemar’s tests and student’s t-test were used to analyzed data set

Results

Table 1. Demographics and comorbidities between clamp versus no-clamp group

Category	No clamp	Clamp	P-value
Age	45.6	45.4	0.94
Sex	79	89	-
Pre-op Wt	127.1	126.9	0.95
HTN	57	63	0.39
DM	32	27	0.44
CAD	10	6	0.30
PAD	2	3	0.65
Sleep Apnea	50	47	0.67
Symptomatic or diagnosis of GERD	29	31	-
Gastritis/Esooph agitis on EGD	50	53	-

Table 2. Factors Impacting Percentage of Excess Body Weight Loss at 12 weeks

Medical Comorbidities	Yes=1	N	Mean	SD	P-value
HTN	0	65	32.5	8.93	0.008
	1	100	28.17	10.71	
DM	0	117	30.62	8.78	0.14
	1	48	28.05	13.07	
Gender	0	27	31.77	11.77	0.3
	1	138	29.5	9.92	
CAD	0	150	30.31	9.88	0.08
	1	15	25.47	12.89	
PAD	0	160	30.19	10.18	0.022
	1	5	19.59	6.26	
Sleep Apnea	0	83	31.98	9.28	0.007
	1	82	27.74	10.76	
Clamp	0	85	30.84	10.59	0.21
	1	80	28.84	9.81	
GERD at 12 weeks	0	140	29.64	10.58	0.49
	1	25	31.18	8.13	

Table 3. GERD symptoms in Clamp versus Bougie in Groups with Pre-operative GERD

GERD Symptoms or Diagnosis (No)			
GERD symptoms at	No clamp	Yes clamp	p-value
Two weeks No	57	62	0.79
Two weeks Yes	6	2	
Six weeks No	48	60	0.19
Six weeks Yes	7	3	
Twelve weeks No	52	52	0.24
Twelve weeks Yes	9	4	
Composite No	59	61	0.37
Composite Yes	12	8	
GERD Symptoms or Diagnosis (Yes)			
GERD symptoms at	No clamp	Yes clamp	p-value
Two weeks No	17	20	0.94
Two weeks Yes	9	11	
Six weeks No	20	24	0.49
Six weeks Yes	6	4	
Twelve weeks No	15	21	0.045
Twelve weeks Yes	9	3	
Composite No	59	61	0.37
Composite Yes	12	6	

Conclusion

- Average age of 200 patients was 45.6, 84% female, 43% Caucasian.
- There was no significant difference in age, gender, medical comorbidities such as hypertension, diabetes, CAD, PAD and GERD diagnosis in between two groups.
- 31% of clamp group and 29% of bougie group complained of GERD symptoms pre-op.
- There was a significant difference in LOS between two groups, 1.5 days for bougie group and 1.15 for clamp group, p value 0.00.
- Patients without hypertension, CAD, PAD and sleep apnea had higher excess body weight loss.
- There was no difference in post-op GERD symptoms between two groups. There was a significance difference in overall GERD symptom improvements for clamp group with odds ratio of 0.44 and p-value of 0.049.

Reference

- Stenard, F. & Iannelli, A. Laparoscopic sleeve gastrectomy and gastroesophageal reflux. World J. Gastroenterol. WJG 21, 10348–10357 (2015).
- Van Wieren, I. A., Thumma, J. R., Obeid, N. R., Varban, O. A. & Dimick, J. B. The influence of gastroesophageal reflux symptoms on patient satisfaction after sleeve gastrectomy. Surgery (2019). doi:10.1016/j.surg.2019.07.003