Stopping The Block: Efficacy of Pre-Operative Bowel Prep in Decreasing Post-Operative Constipation in Bariatric Surgery Patients

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BACKGROUND

- Post-operative constipation after bariatric surgery is the most common post-operative complaint at our institution
- This results in decreased patient satisfaction and quality of life and in severe cases, results in increased need for ED visits and hospitalization
- Limited research has explored the rates of constipation pre-and post-operatively in this patient cohort
- Moreover, no literature exists examining the efficacy of a pre-operative bowel regimen in reducing post-operative constipation

OBJECTIVES

Characterize rates of post-operative constipation in patients undergoing bariatric surgery

Evaluate the ability of a polyethylene-glycol (PEG) based bowel regimen to reduce rates of post-operative constipation

METHODS

- Retrospective, single-center study of adult patients undergoing primary and revisional bariatric procedures
- The use of pre-operative and post-operative PEG bowel prep for bariatric patients was introduced as an institutional quality improvement measure
- For all patients, demographics, pre-existing comorbidities, and pre-operative constipation rates were collected
- During the first 3-months on PEG implementation, patients were surveyed for post-operative constipation using gastrointestinal quality of life (GIQLI) surveys and patient phone calls regarding constipation symptoms and compared to historical 3- month patient cohort
- During the year after the implementation of a standardized PEG-based preoperative regimen, patients were followed for the development of 30-day emergency room visit or hospitalization secondary to constipation and compared to historical 1- year patient cohort
- Student t-tests were used for statistical analysis in both groups.

RESULTS

- During the 3- month exploratory phase, **26/56 (46.43%) patients successfully completed the bowel regimen**

Table 1. Patient Demographics

	No Bowel Regimen (n=68)	Bowel Regimen (n=26)
Age	38.92	43.21
Gender		
Female	54/68 (79.41%)	22/26
Male	14/68 (20.59%)	4/26 (15.38%)
Race		
White	43/68 (63.2%)	18/26 (69.23%)
African American	9/68 (13.2%)	1/26 (1.47%)
Asian	1/68 (1.5%)	0/26 (0%)
Hispanic	0/68 (0%)	6/26 (23.08%)
Other	6/68 (8.8%)	1/26 (1.47%)
Declined to specify	5/68 (7.4%)	0/26 (0%)
Pre-op BMI (mean +/- SE)	45.30 ± 0.85	43.2 ± 5.6*

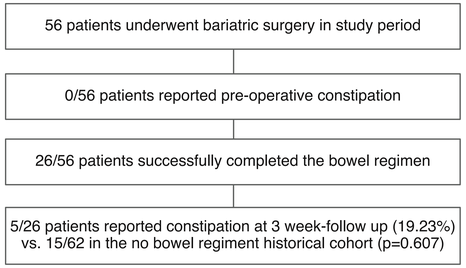
Table 2. Patient Clinical Characteristics

	No Bowel Regimen (n=68)	Bowel Regimen (n=26)
Hypertension	19/68 (28%)	9/26 (34.62%)
Hyperlipidemia	14/68 (21%)	5/26 (19.23%)
Diabetes	9/68 (13.24%)	7/26 (26.92%)
COPD	0/68 (0%)	0/26 (0%)
Autoimmune Disease	10/68 (14.71%)	8/26 (30.77%)
IBS	4/68 (5.88%)	1/26 (3.85%)
Constipation	2/66 (3.03%)	0/26 (0%)
Diarrhea	1/66 (1.51%)	3/26 (11.54%)

Table 3. Procedure Type

	No Bowel Regimen (n=68)	Bowel Regimen (n=26)
Gastric Sleeve	36/68 (52.9%)	14/26 (53.85%)
Roux-en-Y Gastric Bypass	25/68 (36.8%)	10/26 (38.46%)
Sleeve to Bypass	5/68 (7.4%)	1/26 (3.85%)
Band to Bypass	1/68 (1/5%)	1/26 (3.85%)

Figure 1. Differences in Patent Reported Constipation Rates



2/234 (0.85%) patients in the one-year implementation cohort had **significantly less** constipation related occurrences (ED visits, hospitalizations) at 30-day follow-up, compared to 8/219 patients (3.65%) in the historical cohort (p=0.04)

DISCUSSION

- Constipation is a significant post-operative complaint, with ~1 in 5 patients reporting constipation at 3- week follow up
- There was limited patient compliance with bowel regimen, with little under half completing the preparation
- Use of bowel regimen resulted in a decreased, although not statistically significant, rate of post-operative constipation at 3-week follow-up. Increases in sample size may better elucidate if significant differences exist.
- There were significant reductions in constipation related ED visits and hospitalizations secondary to constipation, implying that a bowel regimen is effective in decreasing rates of severe constipation.

CONCLUSION

- Use of bowel regimen shows preliminary efficacy in reducing constipation related occurrences, but may have limited effect on patient-reported constipation
- Compliance with a bowel regimen is low– further work will focus on improving compliance
- Overall, further research is needed to evaluate the utility of a bowel regimen in reducing post-operative constipation

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