Should Diverticulitis be Considered a Qualifying Weight-Related Comorbidity for Bariatric Surgery?

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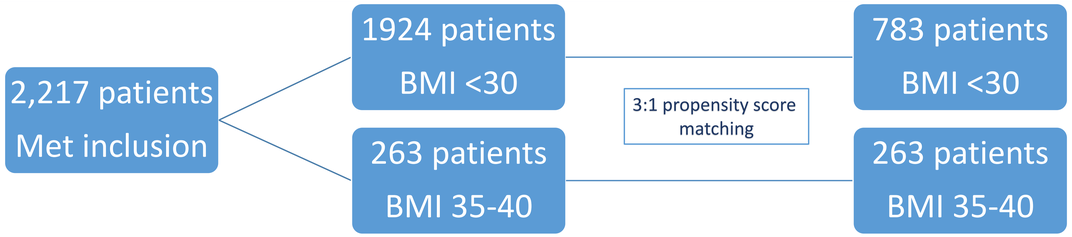
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INTRODUCTION

With the obesity epidemic, surgeons are operating on increasingly larger patients on a daily basis. Minimally invasive surgery has, from a technical standpoint, helped ease this burden on surgeons. However, the question remains as to how does weight impact surgical outcomes and at what point should we consider expanding the indications for weight loss surgery to improve patient overall morbidity and mortality. The purpose of this study is to determine the role of obesity in elective laparoscopic colectomy for colonic diverticulitis.

METHODS

The American College of Surgeons National Surgical Quality Improvement Program and Colectomy targeted procedure databases were queried from 2012-2019. Patients undergoing an elective, minimally invasive partial colectomy with or without primary anastomosis for an indication of acute or chronic diverticulitis were compared based on BMI less than 30 versus between 35 and 40. A 3:1 propensity scored nearest neighbor match was performed. A covariate balance assessment was performed using the standardized mean difference (SMD) with an SMD > 0.1 considered unbalanced. A post-weighting balance assessment was performed to ensure an optimal balance.



Matched For:

- Age
- Sex
- Smoking
- Functional Status
- Steroid Use
- Bleeding Disorder
- COPD
- Dyspnea
- Dialysis
- ASA Class
- Preoperative Weight Loss

	BMI 35-40	BMI < 30	P value
Conversion to open (%)	11.49	7.02	0.022
Operative time (min)	178	163	0.005
Readmission (%)	7.28	3.83	0.023
Surgical site infection (%)	6.9	5.36	0.357
Anastomotic leak (%)	4.89	2.68	0.07

RESULTS

2,217 patients met inclusion parameters, 1,954 patients with BMI less the 30 and 263 patients with BMI 35-40. The groups' average BMIs were 25.3 ± 3 and 37.1 ± 1.5,respectively. There were no significant differences between the two groups after propensity score matching (783 patients with BMI less than 30 vs 263 patients with BMI 35-40). Post-matched results were significant for patients with BMI 35-40 having higher rates of conversion to open (11.49% vs 7.02%, p =0.022), operative time (178 vs 163 minutes, p = 0.005), and readmission (7.28%vs 3.83%, p = 0.023). There was no significant difference in surgical site infections. While increased in the BMI 35-40 group, the anastomotic leak rate was not statistically significant (4.98% vs 2.68%, p = 0.07).

CONCLUSIONS

Patients with obesity who undergo elective laparoscopic colectomies for diverticulitis are associated with increased rates of conversion to open, operative time, and readmission. Thus, diverticulitis should be a consideration as a qualifying weight-related comorbidity for bariatric surgery.