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Association Between Depression Severity, Medication Use, and Bariatric Surgery Outcomes

Introduction

- Depression is the most common mental health diagnosis among patients undergoing bariatric surgery.
- Impact of depression severity and antidepressant use on postoperative weight loss and perioperative morbidity is unknown.

Objective

- To determine the effect of preoperative depression severity and antidepressant medications use on postoperative weight loss outcomes and perioperative complications on patients undergoing primary bariatric surgery.

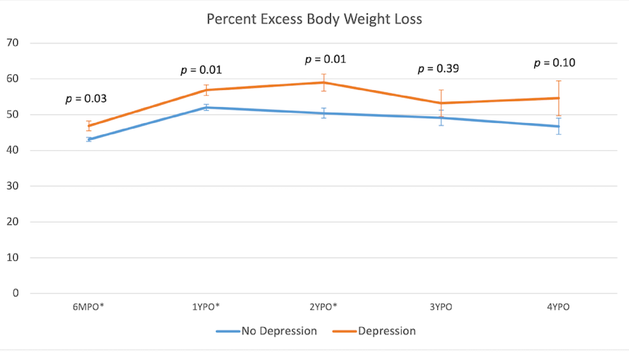

Figure 1. Percentage excess body weight lost annually, up to 4 years postoperatively, characterized by a preoperative diagnosis of depression.

Design

- Patients who underwent primary sleeve gastrectomy or Roux-en-Y gastric bypass between 1/12018-6/30/2024 were identified from our prospectively maintained institutional bariatric surgery database.
- Patients were identified based on a pre-existing diagnosis of depression prior to surgery.
  - Patients with depression were further stratified by severity of depression based on PHQ-9 categories.
- Antidepressant medication use was differentiated by class (SSRI, SNRI, NDRI, TCA, MAOi, and SARI), and number of concurrent medications.
- Outcomes: 30-day anastomotic leak rate, reinterventions, emergency department (ED) visits, and weight loss up to 5 years postoperatively.

Results

- 930 patients qualified for this study.
- 13.8% (n=128) had a diagnosis of depression.
  - 32.8% (n=42) had minimal depression severity.
  - 45.3% (n=58) had mild depression severity.
  - 21.8% (n=28) had moderately severe/severe depression severity.
- Patients with depression had greater excess body weight loss (%EBWL) the following postoperative time periods (Figure 1):
  - 6 months (46.9% vs. 43.1%, *p*=0.03).
  - 12 months (56.9% vs. 52.0%, *p*=0.01).
  - 24 months (59.0% vs 50.4%, *p*=0.01).
- Patients with minimal depression severity had greater %EBWL at 1 year postoperatively, no differences in weight loss at other time points based on depression severity (Figure 2).
- Patients taking SNRI medications had more weight loss at the 3-year postoperative period when compared to other antidepressant medications (66.5% vs 46.7%, *p*=0.03).
  - Not statistically significant at other time points.
  - Most common antidepressant medication used was an SSRI.
- No statistically significant differences in 30-day postoperative complications in patients with and without depression, or depression severity.

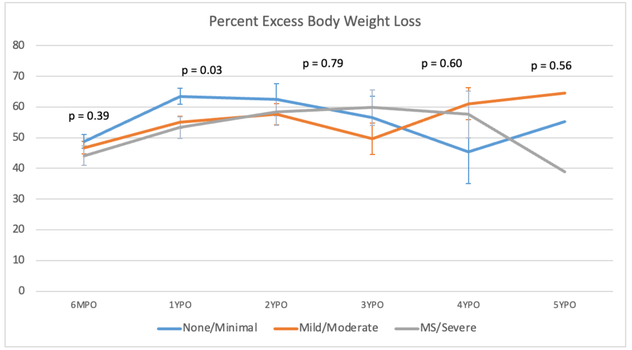

Figure 2. Percentage excess body weight lost per year, up to 5 years postoperatively, characterized by depression severity.

Conclusions

- Patients with depression had greater %EBWL up to 2 years after bariatric surgery compared to those without depression.
- Patients with minimal depression severity had greater weight loss at 1 year postoperatively.
- SNRI use was associated with better 3-year weight outcomes.
- Further studies are indicated to better understand the impact of depression severity and use of antidepressant medications on bariatric surgery outcomes.