EFFECT OF SMOKING HISTORY ON 30-DAY MORBIDITY AND MORTALITY FOLLOWING BARIATRIC SURGERY

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INTRODUCTION

- Smoking and postoperative complications are well document across surgical specialties. Preoperative smoking cessation is frequently recommended by surgeons. In this study, we assessed to what degree documented smoking history increased a patient's risk of postoperative complications

OBJECTIVE

- Our objective was to investigate how the documented smoking history, within 1 year of bariatric surgery, affects on the morbidity and mortality outcomes

METHODS

- MBSAQIP (2015-2018) data was retrospectively reviewed
- Adults (≥18 years of age) who had primary laparoscopic sleeve gastrectomy (LSG) or Roux-en-Y gastric bypass (LRYGB) were included
- Patients were excluded if they had:
  - Any prior obesity surgery; revision or conversion procedure
  - Open or converted to open surgery
  - Were lost to follow-up within 30 days after index procedure
  - Records with missing data
- Patients meeting criteria were stratified into two groups:
  - Smoke history (SH)
  - No smoke history (NSH)
- Perioperative factors and 30-day postoperative outcomes were assessed

Table 1: Demographic and Operative Factors

Patient Operative Characteristics	No Smoking Hystory, N=479,601	Smoking History , N=44,606
Age, Mean (SD)	44.7 (12)	41.8 (10.8)
BMI, Mean (SD)	45.7 (7.7)	46.4 (7.8)
Black or African American, n (%)	87723 (18.3)	7371 (16.5)
Hispanic, n (%)	62319 (13)	5076 (11.4)
Female, n (%)	381445 (79.5)	35422 (79.4)
Male, n (%)	98156 (20.5)	9184 (20.6)
Cardiac surgery or other intervention, n (%)	5244 (1.1)	380 (0.9)
Chronic obstructive pulmonary disease	7100 (1.5)	1648 (3.7)
Dialysis, n (%)	1515 (0.3)	89 (0.2)
Diabetes mellitus, n (%)	126455 (26.4)	11083 (24.8)
Functional status: partially/totally dependent, n (%)	4732 (1.0)	470 (1.1)
Gastroesophageal reflux disease, n (%)	145990 (30.4)	14403 (32.3)
Hyperlipidemia, n (%)	114137 (23.8)	10197 (22.9)
Hypertension, n (%)	233306 (48.6)	19671 (44.1)
Pulmonary embolism, n (%)	5738 (1.2)	510 (1.1)
Myocardial infarction, n (%)	5961 (1.2)	674 (1.5)
Obstructive sleep apnea, n (%)	185875 (38.8)	17413 (39)
Steroid use, n (%)	8331 (1.7)	780 (1.7)
Venous stasis disease, n (%)	5075 (1.1)	511 (1.1)
Operative length, mean (SD)	85.4 (46.7)	84.9 (47.7)

Results

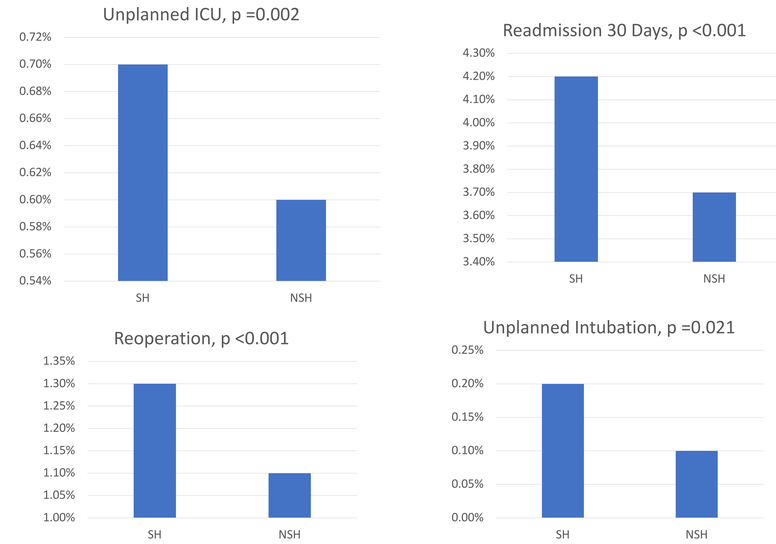


Figure 1: The rates for postoperative complications in SH group was significantly higher than in in the NSH group.

Conclusions

- Patient with Smoking history have a higher likelihood of readmission and reoperation within 30-days of primary bariatric surgery.
- SH patients were more likely to have unplanned intubation, and unplanned ICU admission.
- The current study supports preoperative smoking cessation in patients prior to primary bariatric surgery.
- Further study is warranted to compare short-term cessation vs. long-term cessation preoperatively, which was not assessed in our study.

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