Trends and Comparative Analysis of Primary Bariatric Surgeries in patients with Body Mass Index >60 kg/m2 using the 2015-2021 MBSAQIP database

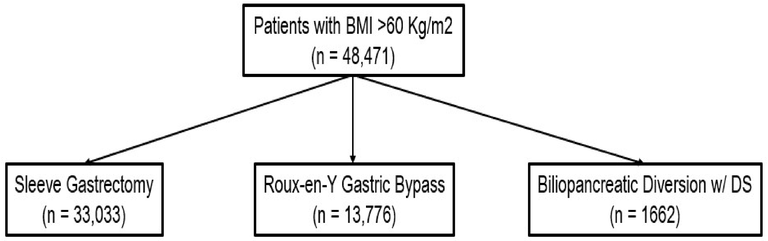
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INTRODUCTION

The most common primary bariatric surgeries performed in patients with BMI > 60 kg/m2 or super super obese (SSO) are Sleeve Gastrectomy (SG), Roux-en-Y Gastric Bypass (RYGB), and Biliopancreatic Diversion with Duodenal Switch (BPD/DS). First, we aim to determine 30-day outcomes between primary SG, RYGB, and BPD/DS in SSO. Second, identify the odds between postoperative complications and each surgical approach.

METHODS

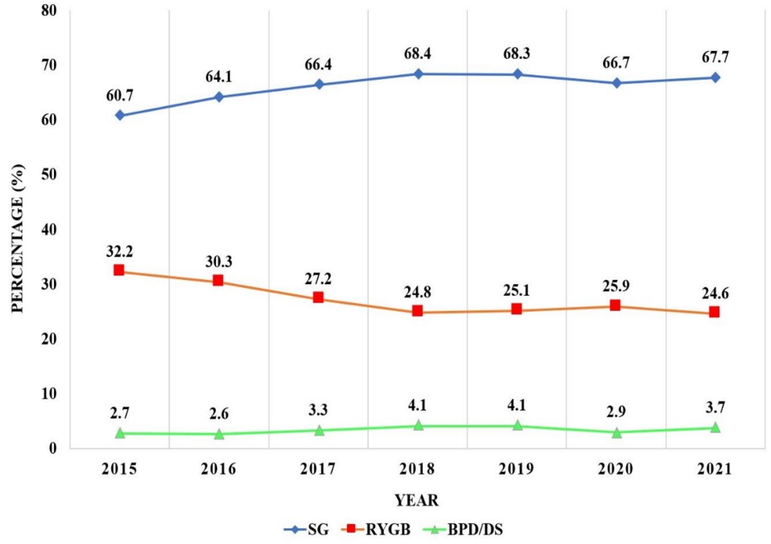
Patients who underwent primary SG, RYGB, and BPD/DS in SSO were identified in the 2015-2021 MBSAQIP database. We compared preoperative characteristics and 30-day outcomes. In addition, a multilogistic regression for overall complications, mortality, readmission, reoperation, and leak stratified by surgical procedure was performed.



RESULTS

- Over the last 7 years, trends of primary SG and BPD/DS in SSO have increased, contrarily to RYGB as shown in Figure 1.
- Preoperative characteristics showed that SSO patients who underwent SG had similar rates of comorbidities as BPD/DS, but lower rates of diabetes, hypertension, hyperlipidemia, sleep apnea, and GERD than RYGB.
- Longer operative time (125 min and 161 min vs 78 min, p<0.001) and hospital length of stay (2.12 days and 2.34 days vs 1.68 days, p<0.001) were found in the RYGB and BPD/DS groups.
- In terms of 30-day outcomes, higher rates of mortality (0.3% and 0.5% vs 0.2%), readmission (6.4% and 6.6% vs 0.9%), reoperation (2.2% and 2.9% vs 0.9%), reintervention (2.3% and 2.4% vs 1.0%), medical complications (3.9% and 4.9% vs 2.4%) such as unplanned ICU admission and blood transfusions, surgical complications (2.8% and 3.3% vs 1.2%) such as bleeding and surgical site infection, and overall complications (5.8% and 6.7% vs 3.3%) were found in SSO who underwent RYGB and BPD/DS compared to SG.
- A multilogistic regression analysis was performed, compared to SG, RYGB and BPD/DS demonstrated higher odds of overall complications (aOR 1.76 ; 2.13), mortality (aOR 1.73 ; 2.61), readmission (aOR 1.64 ; 1.72), and reoperation (aOR 2.33 ; 3.23), respectively. Unlike RYGB, BPD/DS had higher odds of leak (aOR 2.57).

Figure 1. Trends of primary bariatric procedures in patients with BMI ≥60 kg/m2 in the 2015-2021 MBSAQIP Database



CONCLUSION

Trends of primary SG in SSO have increased by over 7% since 2015 and showed the lowest rates of medical, surgical, and overall complications when compared to RYGB and BPD/DS. Therefore, primary SG appears to have the safest 30-day profile and could also be used as a two-stage surgical management for other procedures such as SADI-S or BPD/DS.