



"The Paradox of Low BMI": Higher Complication Rates After SG to RYGB Conversion for GERD using 2020–2023 MBSAQIP Analysis



Oscar Tuesta¹, Adrian Riva¹, Alba Zevallos^{2,3}, Jason Silvers¹, Hien Nguyen⁴, Gina Adrales⁴, Christina Li¹, Michael Schweitzer⁴, Raul Sebastian^{1,4}

¹Department of Surgery, Northwest Hospital, Randallstown, MD, USA

³Universidad Científica del Sur, Lima, Peru

²Department of Surgery, Loma Linda University Medical Center, Loma Linda, CA, USA

⁴Department of Surgery, The Johns Hopkins University, Baltimore, MD, USA

Background

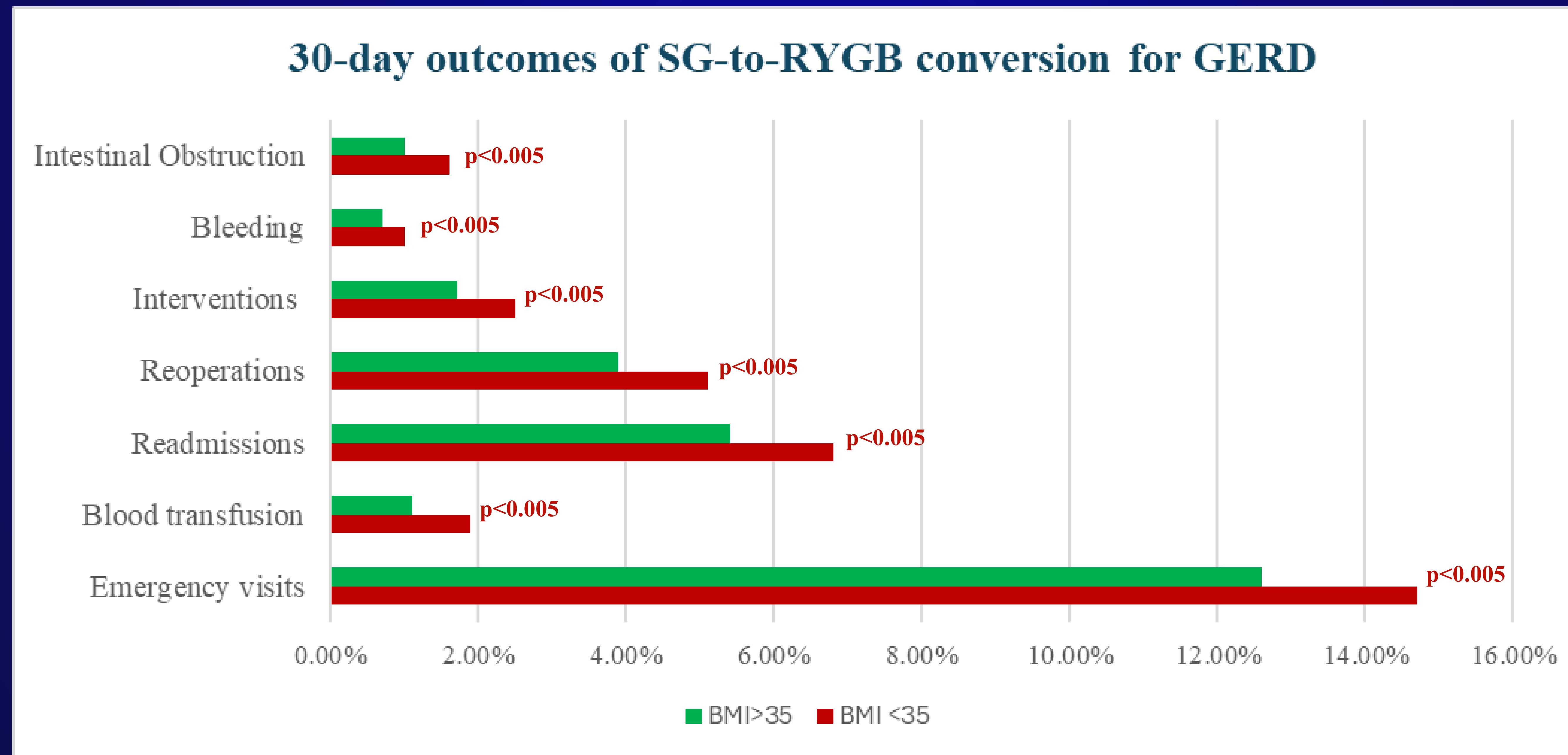
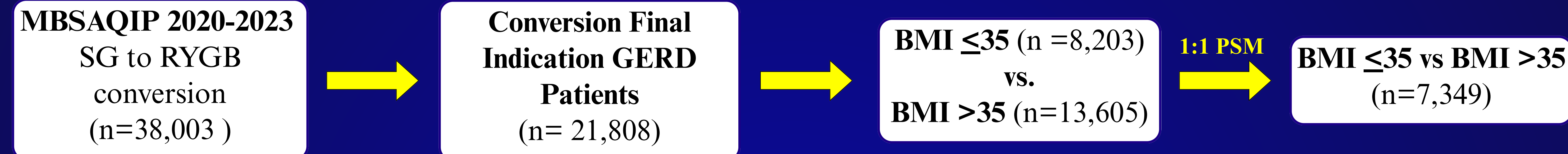
Sleeve gastrectomy (SG) is strongly associated with new or worsening gastroesophageal reflux disease (GERD). While conversion from SG to Roux-en-Y gastric bypass (RYGB) is effective for reflux control, outcomes may differ depending on body mass index (BMI).

Objective

To compare the 30-day outcomes and bariatric-specific complications between patients with BMI $\leq$ 35 versus BMI $>$ 35 who underwent conversion from SG to RYGB due to GERD.

Methods

We analyzed patients from the 2020–2023 MBSAQIP. Only patients who underwent conversion from SG to RYGB for GERD were included. A propensity score matching (PSM) analysis was performed using 21 preoperative variables. Thirty-day postoperative outcomes and bariatric-specific complications were compared in patients with BMI $\leq$ 35 versus BMI $>$ 35.



Results

After 1:1 PSM analysis, we obtained a total of 7,349 patients in each group. Our analysis showed that patients with BMI $\leq$ 35 had higher rates of unplanned ICU admissions (1.0% vs. 0.7%, $p=0.019$), emergency visits (14.7% vs. 12.6%, $p<0.001$), blood transfusions (1.9% vs. 1.1%, $p<0.001$), readmissions (6.8% vs. 5.4%, $p<0.001$), reoperations (5.1% vs. 3.9%, $p<0.001$), interventions (2.5% vs. 1.7%, $p=0.002$), postoperative bleeding (1.0% vs. 0.7%, $p=0.027$), and intestinal obstruction (1.6% vs. 1.0%, $p=0.003$) compared to patients with BMI $>$ 35.

Conclusion

While higher BMI is typically associated with worse outcomes in primary bariatric surgery, SG to RYGB conversion reveals a paradox in which lower BMI is linked to increased complications. Our analysis showed that patients with BMI $<$ 35 demonstrated significantly higher rates of unplanned ICU admissions, emergency visits, blood transfusions, reoperations, interventions, postoperative bleeding and intestinal obstruction.