

Hypoalbuminemia Predicts Serious Complications and Extended Length of Stay in Sleeve Gastrectomy Conversions: An MBSAQIP Analysis of 44,368 Cases

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Background & Objectives

- **Revisional and conversional** bariatric procedures are increasingly **common**
- **Hypoalbuminemia** reflects malnutrition and systemic inflammation and is associated with adverse surgical outcomes
- The impact of **malnutrition** following SG conversion remains poorly characterized
- We examined whether preoperative hypoalbuminemia independently predicts **serious complications** and **extended length of stay (LOS)** following SG conversion

Methods

- Retrospective analysis of the **MBSAQIP** database (2020–2023)
- Patients undergoing **conversion** from **SG** to **RYGB**, **SADI**, or **BPD** were included
- **Hypoalbuminemia** defined as preoperative serum albumin ≤ 3.5 g/dL; extended LOS defined as ≥ 3 days
- Chi-squared and Wilcoxon rank-sum tests compared patient characteristics and 30-day outcomes; multivariable logistic regression identified independent predictors of serious complications and extended LOS

Key Outcomes

- Of 44,368 SG conversion patients, **3,440 (7.8%)** had **hypoalbuminemia**; these patients had **higher BMI**, insulin-dependent **diabetes**, **renal** insufficiency, and history of **VTE** (all $p < 0.001$)
- Hypoalbuminemic patients had higher rates of **serious complications** (8.8% vs 6.3%), **readmissions** (8.9% vs 6.8%), **bleeding** (2.2% vs 1.7%), **leaks** (0.9% vs 0.6%), and extended **LOS** (1.9 vs 1.6 days) (all $p < 0.05$)
- On multivariable analysis, **hypoalbuminemia** independently **predicts serious complications** (OR 1.39; 95% CI 1.22–1.58) and **extended LOS** (OR 1.52; 95% CI 1.38–1.68) (Fig. I).

Results

Effect of Hypoalbuminemia on 30-Day Outcomes After Conversion

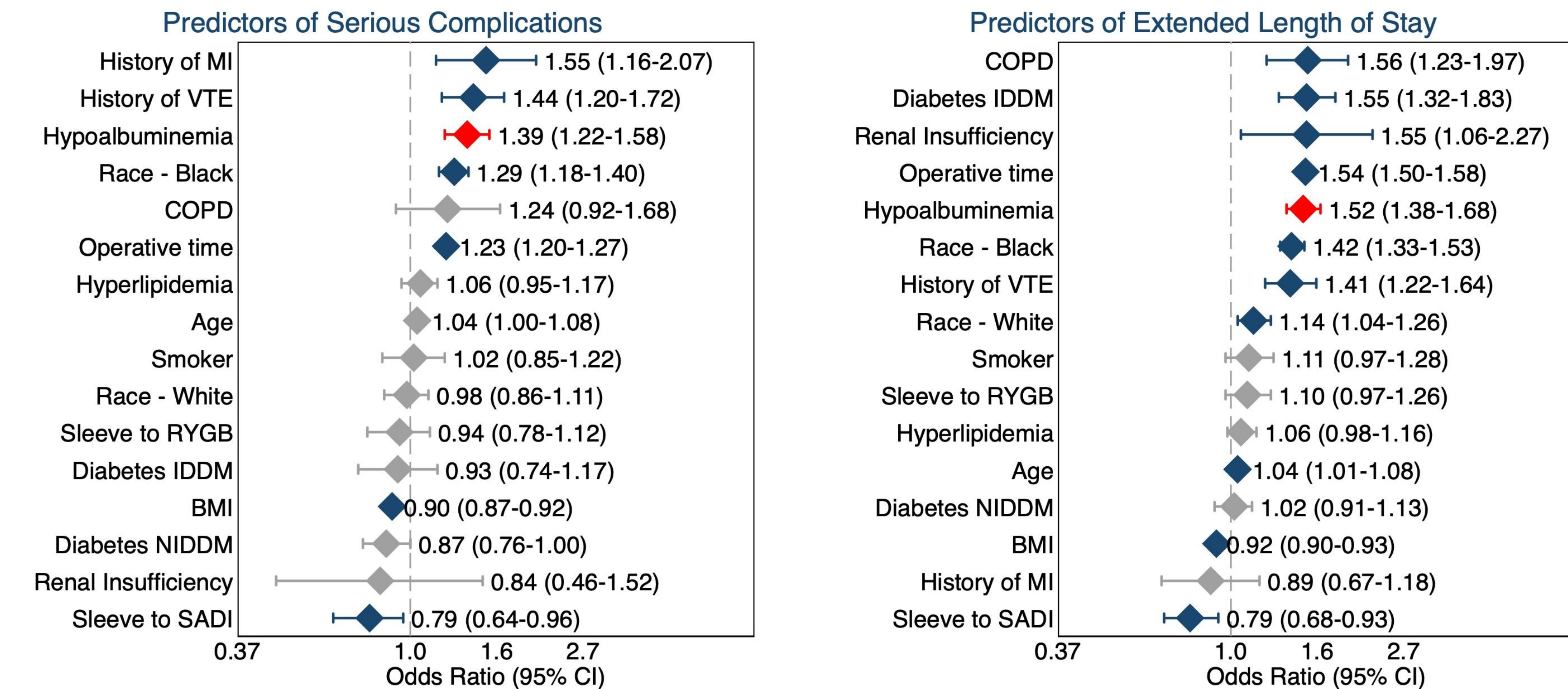


Figure I. Multivariable logistic regression analysis. $p < 0.05$. OR, odds ratio; CI, confidence interval; LOS, length of stay. Age per 10-year increment.

Conclusions

- Preoperative **hypoalbuminemia** independently predicts **serious complications** (OR 1.39) and **extended LOS** (OR 1.52) following SG conversion
- Despite higher BMI, hypoalbuminemic patients carry **greater comorbidity burden**, suggesting a phenotype of **sarcopenic obesity** with underlying **malnutrition** masked by excess adiposity
- Future studies should evaluate **whether preoperative nutritional optimization** reduces morbidity in this **high-risk revisional surgery population**