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History of Gastric Bypass Surgery Increases Risk of Complications Following Total Hip Arthroplasty

Introduction: Among the most common surgical procedures in the United States is total hip arthroplasty (THA). A common bariatric surgery is gastric bypass surgery (GBS), which is indicated by obesity, which itself increases the risk of requiring THA. This study sought to assess the relationship between history of GBS and postoperative outcomes in patients who underwent primary THA

Methods: A retrospective cohort analysis was conducted on patients receiving primary THA between 2010-2021 with data from the National Inpatient Sample database. The primary exposure was a history of GBS. Confounding variables included basic demographics, insurance type, baseline health status, and surgical facility characteristics. Univariate analyses were performed to compare the two cohorts. Multivariable regression analysis adjusting for confounding variables was performed to identify postoperative complication risk of patients with a history of GBS undergoing THA.

Results: Of 819,733 cases fulfilling study inclusion criteria, 10,160 (1.24%) had a history of GBS. A high proportion of patients among both cohorts were 60-69 years old, had female gender, and White race/ethnicity. Many procedures were performed in large, private non-profit, and urban teaching hospitals. On multivariable regression, compared to patients without a history of GBS, those with a history of GBS had 1.58 times higher odds (95% CI 1.46-1.70, $p < 0.001$) of procedure-related complications and 1.17 times higher odds (95% CI 1.12-1.23, $p < 0.001$) of hospital-acquired complications. No significant difference was found in admission mortality ($p=0.368$)

Discussion and Conclusion: Undergoing THA with a history of GBS increases the risk for procedure-related complications and hospital-acquired complications but does not affect admission mortality. To improve patient outcomes, further research is needed on risk stratification for THA candidates with a history of GBS.