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Higher Costs and Prolonged Hospitalization in Patients with Prior Gastric Bypass Surgery Undergoing Primary Total Hip Arthroplasty: A National Database Analysis

Introduction: Total hip arthroplasty (THA) is one of the most commonly performed surgical procedures in the United States. Higher healthcare costs and longer hospital lengths of stay (LOS) can increase the burden on the healthcare system. This study aimed to assess the relationship between prior gastric bypass surgery (GBS) on length of stay and cost among patients who underwent primary THA.

Methods: A retrospective cohort study was performed using the National Inpatient Sample database of primary THA from 2010-2021. Primary exposure was history of GBS. Confounds were basic demographics (age, gender, race/ethnicity, insurance status), baseline health status (Charlson comorbidity index, smoking, inflammatory arthritis, osteoporosis, hip fracture), and facility characteristics (hospital size, location/teaching status, ownership). The primary outcomes studied were hospital LOS and cost. Univariate analyses assessed differences between cohorts. Multivariable log-linear regression was used to evaluate the association between prior GBS on LOS and admission cost among patients who underwent THA.

Results: Our study identified 819,733 cases of THA meeting inclusion criteria, of which 10,160(1.24%) had prior GBS. Many patients in both cohorts were 60-69 y/o, female, White, and on Medicare. Most procedures were performed in large, urban-teaching and private, non-profit hospitals. On multivariable analysis, prior GBS patients had 1.04 times higher (95% CI: 1.03, 1.06; p<0.001) odds of longer stays and 1.06 times higher (95% CI: 1.05, 1.07; p<0.001) odds of higher costs compared to patients without GBS.

Discussion and Conclusion: Patients with prior GBS undergoing primary THA experience significantly longer hospital stays and higher admission costs compared to no prior GBS, even after adjusting for confounds. Future research should focus on preoperative risk stratification and targeted interventions to improve outcomes for THA candidates with prior GBS.