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Mohammed Shah M.S.,B.S.

Advisor(s): David Mai M.D.

Co-author(s): Mohammed Shah, Abdullah Uddin, Zachariah Shearon, Gregory Van Perrier, David H. Mai, Lauren Grossman, Jennifer Hashem, Hugh Selznick, Jeff Schwartz, Jad Bou Monsef, Aditya Maheshwari, Qais Naziri

Title: Increased Postoperative Complications in Irritable Bowel Syndrome Patients Undergoing Primary Total Hip Arthroplasty: A Retrospective National Cohort Analysis

Introduction: Total hip arthroplasty (THA) is among the most common surgical procedures in the United States. Postoperative complications burden both patients and the healthcare system. This study assessed the relationship between irritable bowel syndrome (IBS) and postoperative outcomes in patients undergoing primary THA.

Methods: A retrospective cohort study was performed using the National Inpatient Sample database of primary THA cases from 2010 to 2021. The primary exposure was IBS diagnosis. Confounding variables included demographics (age, sex, race/ethnicity, insurance type), baseline health status (Charlson comorbidity index, smoking, inflammatory arthritis, osteoporosis, hip fracture), and surgical facility characteristics (hospital size, location/teaching status, ownership). The primary outcome was postoperative complications, including air embolism, blood incompatibility, falls/trauma, catheter-associated urinary tract infection, vascular-catheter-associated infection, poor glycemic control, acute kidney injury, blood loss anemia, and retained foreign objects. Univariate analyses assessed cohort differences, and multivariable regression identified complication risk in IBS patients.

Results: Our study identified 819,733 primary THA cases meeting inclusion criteria, of which 11,811 (1.44%) had IBS. Most patients in both cohorts were female, White, and had Medicare. Procedures were commonly performed in large, urban-teaching, private, non-profit hospitals. On multivariable regression, IBS patients had 1.04 times higher odds of postoperative complications (95% CI 1.00-1.09; $p < 0.05$) than non-IBS patients.

Discussion and Conclusion: IBS patients undergoing primary THA had a higher risk of hospital-acquired complications. Further research on risk stratification for THA candidates with IBS is needed to improve outcomes.