

Session/Poster#

Presenter

B50

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Iron Deficiency in Primary Total Hip Arthroplasty Patients is Associated with Increased Rates of Postoperative Outcomes

Introduction: Past studies have not explored the relationship between iron deficiency anemia (IDA) and postoperative outcomes after primary total hip arthroplasty (THA) surgery. The purpose of this study was to compare postoperative outcomes within a minimum of 2 years follow up in THA patients with and without IDA.

Methods: New York State's Statewide Planning and Research Cooperative System (SPARCS) database was retrospectively analyzed from 2009 to 2013 to identify patients who underwent primary THA. Patients were stratified into two cohorts based on IDA status and 1:1 propensity score matched based on age, gender, and obesity status.

Patient demographics, hospital variables, and postoperative outcomes (surgical complications, medical complications, readmissions, revision of THA, reoperations, mortality during hospitalization) were compared between the two cohorts. A logistic regression model with covariates (age, gender, and obesity status) was performed to evaluate the association of IDA with postoperative outcomes after THA surgery.

Results: 60,168 THA patients were identified, and 984 patients remained in each cohort following propensity score matching. IDA patients were found to have longer hospital stays (5.1 days vs. 3.9 days; $p < 0.001$) and increased total surgical charges (\$52,911 vs. \$48,981; $p = 0.006$). Logistic regression showed IDA patients to have increased rates of surgical complications (wound complications, transfusions of blood) and medical complications (acute renal failure) but decreased rates of revision of THA (all, $p < 0.05$).

Conclusion: This retrospective study found that IDA is a significant predictor of increased rates of postoperative medical and surgical complications within a 2-year minimum follow-up of patients who underwent THA. These results suggest additional risks and benefits associated with THA surgery that orthopaedic surgeons may communicate to patients based on their medical conditions.