

Crohn's Disease is a Significant Predictor of Medical Complications in Primary Total Hip Arthroplasty Patients

INTRODUCTION: Crohn's disease (CD) is a systemic inflammatory bowel disease that negatively impacts bone health and results in higher prevalence of bone diseases, which may lead to increased rates of adverse outcomes following orthopaedic surgeries. This study seeks to evaluate CD as a risk factor for postoperative outcomes after primary total hip arthroplasty (THA).

METHODS: The Statewide Planning and Research Cooperative System (SPARCS) database was queried from 2009 to 2013 to select primary THA patients. Other hip-related procedures were excluded, including revision, arthrotomy and tenotomy. Based on the presence of CD, patients were grouped into two cohorts. Demographics, hospital/operative variables and postoperative outcomes, including surgical complications, medical complications, readmissions, reoperations, and mortality during hospitalization were compared. Logistic regression analysis was used to evaluate the predictive value of CD on postoperative outcomes.

RESULTS: 30427 THA patients were identified (115 with CD and 30312 without). There were differences in race (89.6% vs. 81.7% White), total hospital length of stay (5.1 ± 5.1 vs. 4.1 ± 2.8 days), and total surgical charges ($\$57532 \pm 30450$ vs. $\$51010 \pm 26852$) between CD patients and those without, respectively (all, $p < 0.05$). Sepsis, pulmonary embolism (PE), and deep vein thrombosis (DVT) rates were higher in CD patients compared to those without (all, $p < 0.05$). At two-year follow-up, CD independently predicted sepsis (OR=2.8 95% confidence interval [CI] 1.4 – 5.9), PE (OR=3.2 95% CI 1.2 – 8.9), and DVT (OR=3.3 95% CI 1.4 – 7.5) after primary THA (all, $p \leq 0.022$).

DISCUSSION: At two-year follow-up of THA patients, CD was found to be a significant predictor of increased postoperative complication rates. These findings may be beneficial for orthopaedic surgeons to discuss with patients prior to their primary THA procedure.