

### **Ulcerative Colitis is Related to Increased Rates of Postoperative Complications and Mortality During Hospitalization in Total Knee Arthroplasty Patients**

**INTRODUCTION:** Evidence suggests that ulcerative colitis (UC) may contribute to worse surgical outcomes in patients undergoing joint operations. We aimed to utilize the Statewide Planning and Research Cooperative System (SPARCS) database to investigate the impact that UC has on minimum 2-year follow-up postoperative outcomes of primary total knee arthroplasty (TKA) patients.

**METHODS:** Utilizing International Classification of Diseases (ICD-9) codes, the SPARCS database was retrospectively analyzed between 2009 and 2013 to isolate primary TKA patients and split into two groups with or without UC. Patients with any revision of knee replacements were excluded. Univariate analysis was used to compare demographics, hospital/operative variables, and postoperative outcomes between the two groups. Logistic regression with covariates were used to evaluate the significance of UC as a predictor on postoperative outcomes.

**RESULTS:** Out of 89,134 TKA patients, 213 subjects with UC were identified. TKA and UC patients had significant differences in race distribution ( $p=0.008$ ) and higher total surgical charges (\$50,712 vs \$43,023,  $p=0.012$ ) compared to those without UC. No significant differences were seen in age, sex, payment method, obesity status, and Deyo score (all,  $p>0.05$ ). Significant differences were detected in gastrointestinal complications, sepsis and mortality during hospitalization, which were all higher in the UC group (all,  $p<0.05$ ), which was also confirmed in multivariate regression analyses after controlling for covariates (gastrointestinal complications [OR=4.6 95%CI (1.7–12.5),  $p=0.003$ ], sepsis [OR=2.0 95%CI (1.1–3.7),  $p=0.027$ ] and mortality during hospitalization [OR=2.6 95%CI (1.2–5.6),  $p=0.015$ ]).

**DISCUSSION:** UC is a significant predictor of gastrointestinal complications, sepsis and mortality during hospitalization in TKA patients. Surgeons should be aware of a possible increased postoperative mortality rate amongst TKA patients with UC.