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Crohn's Disease in Total Knee Arthroplasty Patients Correlates with Increased Rates of Postoperative Complications and Readmissions

INTRODUCTION: Joint involvement is a common extraintestinal manifestation of Crohn's Disease (CD) that may require total knee arthroplasty (TKA). There is a paucity of evidence regarding the relationship between CD and postoperative outcomes after TKA surgery. This study seeks to evaluate the impact of CD on 90-day and > 2-year follow-up postoperative outcomes of TKA patients.

METHODS: Using specific International Classification of Diseases (ICD-9) codes, we retrospectively analyzed the Statewide Planning and Research Cooperative System database (2009-2013), identified TKA patients, excluded those with any revision of knee replacements, and split the population into two groups, according to their CD diagnosis (CD and no-CD). Demographics and postoperative outcomes were compared between both patient cohorts. Logistic regression analyses were utilized to evaluate the association of CD with 90-day and overall postoperative outcomes.

RESULTS: 89,134 TKA patients were identified, 244 of whom had CD. Significant differences were found in age, race distribution, insurance, and Deyo score (all, $p<0.05$). CD was an independent predictor of 90-day and overall medical complications, surgical complications, and readmission. CD was a significant predictor of overall blood transfusions (OR=1.51 [95% CI 1.14-2.00], p=0.004), acute renal failure (OR=1.65 [95% CI 1.05-2.60], p=0.031), and pulmonary embolism (OR=2.45 [95% CI 1.30-4.63], p=0.006). Patients with CD also had 1.36 increased odds of 90-day readmissions (OR=1.36 [95% CI 1.03-1.79], p=0.032) and 1.33 increased odds of overall readmissions (OR=1.33 [95% CI 1.02-1.73], p=0.033) compared to patients without CD.

DISCUSSION: CD patients undergoing TKA have increased odds for readmissions, as well as renal and thromboembolic incidences. Preoperative medical optimization of CD may help reduce or prevent these complications.