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Crohn's Disease Linked to Postoperative Complications in Primary Total Knee Arthroplasty

Introduction: Crohn's disease (CD) is an inflammatory bowel disorder which can often present with extra-intestinal manifestations including joint pain and arthritis. These symptoms may affect outcomes for common surgical procedures, such as total knee arthroplasty (TKA). This retrospective cohort study looks at postoperative outcomes of primary TKA compared among patients with and without CD.

Methods: The National Inpatient Sample (NIS) database was queried from 2010 to 2019 to identify primary TKA patients. The 1,359,957 TKA patients were then grouped into two cohorts: patients with CD (n1=3,430) and patients without CD (n0=1,356,527). This study only considered patients aged 18 or older and excluded those with missing data or those admitted for a revision TKA. Procedure related complications, other medical complications, revision, reoperation, admission mortality, discharge disposition, cost of admission, and length of stay were all evaluated using multivariable regression analysis to determine associations of CD with postoperative outcomes after TKA. Pearson's Chi-squared test or Fisher's exact test were performed for categorical variables and Wilcoxon rank sum test for continuous variables. Statistical significance was set at the 0.05 level.

Results: Of the 1,359,957 patients who underwent primary TKA, 0.252% had CD. CD patients had increased rates of procedure-related complications such as periprosthetic joint infection, sepsis, septicemia, and septic shock, as well as other medical complications, including blood loss anemia and acute kidney injury. Analysis showed CD patients also had longer lengths of stay.

Conclusion: This retrospective study shows that having CD carries a significant association with increased postoperative complications from primary TKA. These results highlight the importance of perioperative care for CD patients and prompt further research to reduce postoperative complications such as periprosthetic joint infection and blood loss an