

Effect of Selective Serotonin Reuptake Inhibitors on One-Year Postoperative Outcomes in Total Knee Arthroplasty: A Matched Cohort Study of 106,226 Patients

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INTRODUCTION: Selective Serotonin Reuptake Inhibitors (SSRIs) are commonly prescribed for psychiatric disorders, such as anxiety and depression, and are used by a considerable number of patients undergoing total knee arthroplasty (TKA). There is very little literature examining the effects of these widely used drugs on orthopedic surgery outcomes. This study aims to compare the postoperative outcomes of TKA patients who use SSRIs with those who do not.

METHODS:

This retrospective cohort study utilized data from the TriNetX Research Network, which includes over 85 healthcare organizations and more than 120 million patient records. Patients undergoing TKA were identified using Current Procedural Terminology (CPT) codes, while those with a concomitant SSRI prescription within six months of the indexed TKA event were identified through Anatomical Therapeutic Chemical (ATC) codes. Patients were propensity-matched based on age, sex, and comorbidities. The odds of periprosthetic fractures, postoperative joint infections, mechanical complications, and revisions were assessed over a one-year period following the TKA index event.

RESULTS:

A total of 260,751 patients undergoing TKA were included, with 206,481 having no use of SSRIs and 54,270 having recorded use of SSRIs. After successful matching, there were 53,113 patients in both the SSRI and non-SSRI groups. Patients using SSRIs had increased odds of postoperative joint infections (OR 1.39; $p<0.001$), periprosthetic fractures (OR 1.96, $p<0.001$), and mechanical complications (OR 1.44, $p<0.001$). Additionally, patients taking SSRIs were at higher risk of requiring revision within one year (OR 1.43, $p<0.001$).

DISCUSSION AND CONCLUSION:

This study found that patients taking SSRIs had higher odds of complications following TKA, including joint infection, periprosthetic fractures, and mechanical complications. These results indicate a need for future studies to further explore the association between SSRIs and negative orthopedic outcomes. Overall, patients using SSRIs may experience worse postoperative outcomes following TKA.

