

## **Impact of general versus neuraxial anesthesia on total hip arthroplasty outcomes: retrospective NSQIP database cohort study**

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### **INTRODUCTION:**

There is no established consensus on the use of neuraxial anesthesia (NA) compared to general anesthesia (GA) for total hip arthroplasty (THA). In this study, we aim to compare postoperative outcomes of patients who underwent primary THA with NA compared to GA using the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) database.

### **METHODS:**

Retrospective cohort analysis was performed using ACS NSQIP data between 2012 and 2020. Patients who underwent primary THA were identified using the Current Procedural Terminology (CPT) code for THA (27130). Univariate and multivariable regression analyses were performed using the following primary outcome measures: postoperative complication, postoperative transfusion, readmission, reoperation, and mortality.

### **RESULTS:**

221,245 cases of primary THA were selected for this study. 43.5% (96,191) of cases received NA. In multivariable regression analysis, NA was associated with a lower risk of postoperative complication (odds ratio [OR] 0.8, 95% confidence interval [CI] 0.8-0.9;  $p < 0.001$ ), blood transfusion (OR 0.62, 95%CI 0.59-0.65;  $p < 0.001$ ), readmission (OR 0.89, 95%CI 0.85-0.94;  $p < 0.001$ ), reoperation (OR 0.92, 95%CI 0.86-0.98;  $p = 0.011$ ), and mortality (OR 0.73, 95%CI 0.57-0.93;  $p = 0.11$ ), when compared to GA.

### **DISCUSSION AND CONCLUSION:**

Compared to GA, patients undergoing primary THA with NA were observed to have lower risk of postoperative outcomes including complication, transfusion, readmission, reoperation, and mortality. Further work is still required to elucidate the causality of these findings.