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Regional Versus General Anesthesia in Intertrochanteric Fracture Surgeries: An ACS-NSQIP 2008-2016 Study

Introduction: Intertrochanteric fracture surgeries are performed using either general or regional anesthetic techniques. Current data is inconclusive about the effect of anesthetic technique on postoperative outcomes. This study examined 30-day postoperative outcomes of regional versus general anesthesia in the setting of intertrochanteric fracture surgery using ACS-NSQIP 2008-2016 database.
Method: The American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) 2008-2016 database was queried via CPT codes for intertrochanteric fracture procedures (27244, 27245), which were categorized into general or regional anesthesia. One-to-one propensity score matched controlling for estimated probability of morbidity, age, and gender was performed. Patient demographics, comorbidities, and 30-day postoperative outcomes were collected. Univariate and multivariate logistic regression models controlling for the above covariates were used to determine anesthetic type as a risk factor for adverse postoperative outcomes.
Results: A total of 42468 patients underwent intertrochanteric fracture surgeries between 2008 and 2016. 28446 (67.0%) received general anesthesia and 277 (0.7%) received regional anesthesia. After one-to-one propensity matching, 162 patients were selected from each group. Postoperatively, 132 patients (40.7%) experienced complications. Patients who received general anesthesia were at higher risk for any postoperative complications (OR = 2.2, 95% CI = 1.4–3.4, p<0.001).
Conclusions: Our results showed that general anesthesia was associated with increased risks of postoperative complication compared to regional anesthesia. Although more research is needed on the effects of anesthetic type on postoperative outcomes, we offer further consideration for the use of regional versus general anesthesia in the setting of intertrochanteric fracture surgeries.