Risk Factors for Adverse Postoperative Outcomes following Total Hip Arthroplasty for Intertrochanteric Hip Fractures

Introduction: One modality of treating intertrochanteric hip fractures (ITHF) is total hip arthroplasty (THA). However, there is a paucity of data regarding risk factors for adverse outcomes in this context. The purpose of this study was to evaluate the 1) rate and 2) risk factors for adverse postoperative outcomes in patients undergoing THA for ITHF.

Methods: The American College of Surgeons National Surgical Quality Improvement Program database was retrospectively reviewed for patients who underwent THA for ITHF between 2008 and 2016. Primary endpoints were the rate of adverse outcomes (any complication, readmission, reoperation) and patient-related risk factors associated with adverse outcomes within 30 days following the procedure. A logistic regression model was used to determine the odds ratios (OR) of comorbid conditions on adverse outcomes. A p value of 0.05 was denoted to be the significance threshold.

Results: The database query yielded 221 patients who underwent THA for ITHF. Patients in the study group were older (mean age 73.3), mostly female (68.3%), and mostly White (86.4%). Adverse events occurred in 47.1% of patients. The rates of any complication, readmission, and reoperation were 44.8%, 7.0%, and 2.1%, respectively. A large proportion of complications was “bleeding requiring blood transfusion.” Underweight patients had a significantly lower risk of adverse outcomes (OR: 0.2 [0.1-0.8], p=0.023).

Conclusion: The rate of adverse outcomes following THA for ITHF was relatively high at 47.1%. However, a significant proportion of that was attributable to bleeding requiring blood transfusion. Many potential risk factors such as increased BMI, age, and smoking were not associated with an increased risk of adverse 30-day postoperative outcomes in this study group. Notably, underweight patients had a significantly lower risk of adverse outcomes. The findings from this study may be beneficial in the risk stratification of patients with ITHF.