

The Lawrence D. Dorr Surgical Techniques & Technologies Award

Differences in Post-Operative Outcomes between Total Hip Arthroplasty for Fracture vs. Osteoarthritis

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Introduction: Total hip arthroplasty (THA) is a repeatable and reliable intervention with measurable impact on quality of life for patients with degenerative hip conditions. Hip fracture is an increasingly common expanded indication for THA and warrants outcome analysis so as to best inform risk assessment models, public reporting of outcome and value based reimbursement schemes.

Methods: The National Surgical Quality Improvement Program (NSQIP) data file from 2011 to 2014 was used to identify all patients undergoing THA via current procedural terminology (CPT) code 27130. Propensity score matching in a 1:5 fashion was used to compare 2 cohorts: THA for osteoarthritis and THA for fracture. Primary outcomes included Center of Medicare and Medicaid Services (CMS) reportable complications, unplanned readmission, post-surgical length of stay, and discharge destination. χ^2 tests for categorical variables, and Student t test for continuous variables were used to compare the two cohorts and adjusted linear regression analysis used to determine the association between hip fracture and THA outcomes of interest.

Results: 58,302 patients underwent elective THA for osteoarthritis and 1,580 patients underwent THA for hip fracture. Successful propensity score matching eliminated differences between cohorts with the exception of functional status. Rates of CMS-reported complications (4.0% vs 10.7%; $P < .001$), non-home bound discharge (39.8% vs 64.7%; $P < .001$), readmission (4.7% vs 8.0%; $P < .001$), and mean days of post-surgical hospital stay (3.2 vs 4.4; $P < .001$) were greater in the hip fracture cohort. THA for hip fracture was significantly associated with increased risk for CMS-reportable complications (OR 2.67; 2.17-3.28), non-home bound discharge (OR 1.73; 1.39-2.15), and readmission (OR 2.78; 2.46-3.12).

Conclusions: Compared to elective THA for osteoarthritis, THA for hip fracture is associated with greater rates of post-operative morbidity. Our findings support recent advocacy for the exclusion of THA for fracture from THA bundled pricing methodology and public reporting of outcomes.

Notes
