Zahra Vafaei Naeini
L2
LSU Health Sciences Center, New Orleans, LA

Peter Krause, M.D.
LSUHSC Department of Orthopedics

"Social Determinants of Health and Disparities in Outcomes Following Geriatric Acetabular Fractures"

Introduction: Acetabular fractures in geriatric patients present unique challenges due to poor bone quality, complex fracture patterns, and multiple comorbidities. Treatment approaches vary widely, often influenced by surgeon preference and institutional resources rather than standardized guidelines. Emerging evidence in hip fracture populations suggests that socioeconomic and demographic disparities may significantly impact surgical care and outcomes. This study aims to evaluate how social determinants of health (SDOH), including race, insurance status, income, and hospital characteristics, influence treatment patterns and outcomes among elderly patients with acetabular fractures.

Methods: We are conducting a retrospective cohort study using the Trauma Quality Improvement Program (TQIP) database from 2020–2023. Patients aged ≥65 with acetabular fractures are included. Variables analyzed include demographics (age, sex, race/ethnicity), socioeconomic measures (insurance type, median income by zip code), comorbidities, and hospital characteristics (urban vs. rural, teaching status, surgical volume). Treatment strategies are categorized as non-operative management, open reduction internal fixation (ORIF), total hip arthroplasty (THA), or combined ORIF/THA. Primary outcomes include complications, mortality, hospital length of stay, readmission, and discharge disposition. Multivariable regression and hierarchical modeling are used to assess associations between SDOH and outcomes. This IRB-approved study is ongoing and supported by an institutional grant.

Results: Based on prior literature, we anticipate that patients from minority racial/ethnic groups and those with Medicaid or self-pay status will face delays to surgery, higher complication rates, and increased mortality compared with privately insured patients. Earlier studies in hip fracture cohorts have demonstrated longer surgical delays and higher complication rates among African American patients and increased mortality and readmissions among socioeconomically disadvantaged groups.

Conclusion: This study will clarify how patient- and hospital-level disparities shape outcomes in geriatric acetabular fracture care. Identifying inequities related to social determinants may inform the development of standardized, equity-focused treatment protocols to reduce musculoskeletal health disparities and improve outcomes for vulnerable older populations.