Frequency and Treatment Trends for Periprosthetic Fractures About Total Hip Arthroplasty in the United States

Matthew DeHart, MPH, Blake Obrock, DO, Amer Mirza, MD, Paul Duwelius, MD, Paxton Gehling, BS, Jacob Coleman, BS, Thomas Kowalik, MD, John Cox, MD

Introduction: Periprosthetic proximal hip fractures (PPHFx) are a challenging complication with variability in the quality and size of prior epidemiologic studies. We aim to augment this literature using the largest publicly available sampled database in the US.

Methods: The HCUP-NIS was used to analyze trends related to the frequency, mortality, treatment, patient demographics, length of stay, and cost of care of PPHFx from 2006-2010.

Results: Over the study period, the rate of PPHFx, ORIF and revision rates, length of stay (8 days, p<.0001), mortality (3%), and time to procedure (1.98 days, P<.0001) all remained stable. Demographic and regional characteristics appear to be remaining constant with a higher proportion of females suffering PPHFx, more fractures in the South (p<.0001), and most fractures being treated at urban non-teaching hospitals (p<.0001). Disposition similarly was stable with 74% discharging to skilled nursing facility. Despite these consistencies, hospital charges increased by $32,705 over the study period (p<.0001).

Conclusion: As the number of arthroplasty procedures increases, improved understanding of the epidemiology of PPHFx will be key to reducing the morbidity and cost associated with periprosthetic fractures.