Preoperative Contralateral Joint Pain and Back Pain May Increase 90-Day Healthcare Utilization Following Primary Total Hip Arthroplasty

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INTRODUCTION: Persistent pain and functional limitations after primary total hip arthroplasty (THA) remain significant concerns, particularly in patients with coexisting musculoskeletal conditions. Preoperative pain in the contralateral lower extremity or the spine may influence postoperative recovery and healthcare utilization. However, their full impact remains poorly understood. This study evaluates the association between preoperative contralateral joint and/or back pain and healthcare utilization following primary THA.

METHODS:

A prospective cohort of Medicare patients who underwent primary THA (n=5352) between 2016–2023 from a single healthcare system was analyzed. Patients were grouped based on preoperative contralateral joint and/or back pain measured by Total Painful Joints and Oswestry index questions into contralateral joint and back pain (n=2094, 39%), contralateral joint pain only (n=329, 6%), back pain only (n=1997, 37%), and no contralateral joint pain or back pain (n=932, 17%) groups. Multivariable logistic regression models were used to compare healthcare utilization parameters between patients with and without respective pain using odds ratio (OR) and 95% confidence interval (CI). Outcomes assessed included length of stay (LOS), discharge disposition (DD), 90-day readmission, 90-day emergency department (ED) visits, and 1-year reoperations. The models were controlled for pre-specified demographics, baseline PROMS, and surgical confounding variables. A p-value <0.05 was considered statistically significant.

RESULTS: On univariate analyses, patients with no pain, back pain only, or contralateral pain only had the higher rates of adverse outcomes compared to those without any pain, respectively. The overall rates increased progressively across these groups for prolonged LOS ≥2 days (32%, 36.6%, 39.2%, 40.7%; $p<0.001$), non-home discharge (11.9%, 13.7%, 15.5%, 16.1%; $p<0.01$), 90-day readmissions (6.8%, 6.7%, 6%, 9.2%; $p<0.01$), 90-day ED visits (10.1%, 11.2%, 10.6%, 14.5%; $p=0.001$), and 1-year reoperations (2.1%, 1.9%, 2.4%, 3.06%; $p<0.01$). However, multivariate analyses did not show any association between having any pain type and the risk of 90-day healthcare utilization or reoperation ($p>0.05$ for all).

DISCUSSION AND CONCLUSION: Preoperative pain in the back and/or contralateral joint, regions unrelated to the operative joint, may be associated with increased healthcare utilization after THA. Patients reporting both pain types had the highest rates of healthcare utilization, highlighting the need for comprehensive preoperative assessment and optimization of coexisting musculoskeletal conditions to improve postoperative outcomes and reduce resource use. These findings are particularly important in the context of value-based care, where unmanaged comorbid pain may increase costs and negatively impact bundled reimbursement metrics.