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The Impact of Hyperparathyroidism on Outcomes and Complications Following Total Hip Arthroplasty With Minimum 2-Year Surveillance

Introduction: This study aims to compare outcomes and complication rates between patients with and without hyperparathyroidism undergoing surgery for total hip arthroplasty (THA). There is limited literature evaluating the impact of hyperparathyroidism on long-term outcomes after THA surgery.

Methods: Using New York Statewide Planning and Research Cooperation System (SPARCS) database, patients admitted from 2009 to 2011 with hyperparathyroidism who underwent THA with a minimum 2-year follow-up surveillance were retrospectively reviewed. Propensity score-match by age, sex, and obesity status was performed before analysis. Univariate analyses evaluated demographics, complications, and revisions. Multivariate binary logistic regression models were created to analyze association between hyperparathyroidism and postoperative outcomes controlling for sex, age, and obesity status.

Results: Among 340 propensity score-matched patients (hyperparathyroidism: n=170; no-hyperparathyroidism: n=170), mean age was 69.3 years with 68.2% female and 88.2% obese for both cohorts (all, p=1.000). The hyperparathyroidism cohort had more white patients (94.7% vs. 78.7%, p=0.001), higher Charlson Deyo comorbidity score (1.7 vs. 1.0, p <0.001), longer length of stay (5.78 vs. 4.27 days, p < 0.001), and higher surgical charges (\$59,779 vs. \$36,950, p <0.001). Hyperparathyroidism was found not to have a significant increase in as well as not an independent risk factor in the rate of complication, reoperation, revision, readmission, and mortality (all, p >0.05).

Discussion: Patients who underwent THA with hyperparathyroidism had higher surgical charges, longer length of stay, and Charlson Deyo comorbidity score compared to a patient cohort without hyperparathyroidism. Hyperparathyroidism does not significantly increase the rate of complication, reoperation, revision, readmission, or mortality for THA patients. These results can support management of postoperative concerns in this cohort.