Paper #8

Increased Complication Rates in Octogenarians Undergoing Same-Day Discharge Following TKA

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Introduction: Same-day discharge pathways in total knee arthroplasty (TKA) are gaining popularity as a means to increase patient satisfaction and reduce overall costs, but these pathways have not been thoroughly evaluated in potentially at-risk populations, such as patients ≥80 years old. The purpose of this study was to compare 90-day complications and mortality following same-day discharge after primary TKA in patients ≥80 years old and those <80 years old.

Methods: Patients who underwent unilateral TKA, were discharged on postoperative day 0, and had a minimum 90-day follow-up were identified in a national insurance claims database (PearlDiver Technologies) using CPT code 27447. These patients were stratified into two cohorts based upon age: 1) non-octogenarians (<80 years old) and 2) octogenarians (≥80 years old). These cohorts were propensity matched based upon sex, Charlson Comorbidity Index, and obesity status. Univariate analysis was performed to determine differences in 90-day complications and mortality between the two cohorts.

Results: In total, 1,111 patients were included in each cohort. Both cohorts were successfully matched, with no observed differences in matched parameters for demographics or comorbidities. There was no significant difference in 90-day mortality between the two cohorts ($p=0.896$). However, octogenarians were at significantly increased risk of postoperative atrial fibrillation (20.8% vs. 10.4%; $p<0.001$), non-atrial fibrillation arrhythmias (8.4% vs. 5.6%; $p=0.009$), pneumonia (4.5% vs. 2.2%; $p=0.002$), stroke (3.1% vs. 1.7%; $p=0.037$), heart failure (10.5% vs. 7.5%; $p=0.012$), and urinary tract infection (14.3% vs 9.4%; $p<0.001$) compared to the non-octogenarian cohort.

Conclusions: Relative to matched controls, octogenarians were at significantly increased risk of numerous 90-day medical complications following same-day primary TKA, including cardiopulmonary complications, stroke, and urinary tract infection. Clinicians should be cognizant of these complications and counsel patients appropriately when electing to perform same-day TKA in the octogenarian population.

Notes