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Simultaneous Bilateral Versus Unilateral Total Joint Arthroplasty Outcomes in Octogenarians

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Introduction:

As advances in medicine have increased life expectancy, more octogenarians are undergoing total hip and knee arthroplasty than ever before. Elderly patients with bilateral end-stage hip or knee arthritis want to know if it is safe to have bilateral surgery under a single anesthetic, to restore their quality of life as quickly as possible. Yet, simultaneous bilateral total joint arthroplasty (SBTJA) in octogenarians remains controversial.

The purpose of this study was to compare 90-day outcomes of simultaneous bilateral TJA versus unilateral TJA in patients ≥ 80 years old.

Methods:

We conducted a retrospective cohort study that included all patients ≥ 80 years old who underwent elective primary TJA performed by a single surgeon in a high-volume arthroplasty center between February 2014 and July 2021 as simultaneous or unilateral procedures. Patients were excluded if the procedure was performed for any reason other than degenerative joint disease or if hardware was removed at the time of surgery.

Outcome variables assessed in this study were hospital length of stay (LOS), blood transfusion rate, discharge disposition, and 90-day adverse events (i.e., emergency department visits, unplanned readmissions, complications, and mortality). Any patients who had an ER visit or readmission in the first 90 days after surgery were identified, and a detailed chart review was performed. Descriptive statistics were performed for all patients, and then separated by unilateral/bilateral procedures.

Results:

Of the 241 patients included in this study, 101 underwent unilateral TKA, 92 underwent unilateral THA, 40 underwent simultaneous bilateral TKA, and 8 underwent simultaneous bilateral THA. Overall, the patients included in this study had an average age of 83.4 years old, a BMI of 26.1, and 66.5% were female. There were no significant differences in age, gender, and BMI among unilateral TJA and simultaneous BTJA groups.

The simultaneous bilateral TJA cohort had a higher rate of postoperative blood transfusions (20.8% versus 3.6%) and a greater proportion of patients discharged to a rehabilitation facility rather than home (95.8% versus 39.9%).

There was no major difference in 90-day ED visit rates between simultaneous bilateral TJA (2/48, 4.2%) and unilateral TJA (5/193, 2.6%) cohorts.

In addition, 90-day hospital readmission rates were similar between simultaneous bilateral and unilateral TJA cohorts (4.2% versus 3.6%).

No patients died within 90 days postoperatively.

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Conclusion:

Although octogenarians who underwent simultaneous bilateral TJA were more likely to be discharged to a rehabilitation facility and required significantly more perioperative transfusions compared to those undergoing unilateral TJA, the odds of a 90-day major complication and readmission were similar between groups.

Simultaneous bilateral total hip and knee arthroplasty can be a safe and effective option for octogenarians. Complications and mortality are not higher for SBTJA compared to UTJA in this population.