AAHKS Clinical Research Award

Are Minimum 2-Year PROMs Necessary for Accurate Assessment of Patient Outcomes After Primary TKA?

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Introduction: The 2-year minimum follow-up after total knee arthroplasty (TKA) required by most academic journals is based on historical implant survivorship studies rather than patient-reported outcome measures (PROMs). Additionally, the COVID-19 pandemic placed an unprecedented burden on staff and halted asymptomatic clinic visits to minimize in-person exposure. The purpose of this study was to determine if clinically meaningful differences are observed in PROMs beyond the first year following TKA.

Methods: A retrospective review of prospectively collected PROMs for 1,093 primary TKAs at an academic center was performed. Changes in pain, function, activity level, and satisfaction were compared at four follow-up intervals—preoperatively, 4-months, 1-year, and minimum 2-years using repeated measures analysis.

Results: Response rates for preoperative, 4-month, 1-year, and minimum 2-year PROMs were 88.2%, 69.9%, 63.6%, and 55.7% respectively. Pain with Knee Society level walking and while climbing stairs, UCLA activity level, and KOOS Jr. scores improved from preoperative levels at 4-months, 1-year, and minimum 2-years. Patient satisfaction also improved over postoperative follow-up intervals (84.0%, 87.3%, 90.9%). While PROMs improved with statistical and clinical significance preoperatively to 4-months to 1-year ($p \leq 0.082$), improvements from 1-year to minimum 2-year follow-up were small and did not reach MCIDs for most PROMs demonstrating significant overlap of 95% confidence intervals.

Conclusion: While long-term follow-up after TKA remains important for implant survivorship and function, with the numbers available, 1-year PROMs were as clinically reliable and meaningful as 2-year PROMs. These findings question the necessity of in-person visits to collect PROMs beyond 1-year and suggest that 1-year outcomes are reliably predictive of longer-term outcomes for peer-reviewed publication.

Notes