

Patients with Kellgren-Lawrence Grade 3 and 4 Osteoarthritis Benefit Equally from Total Knee Arthroplasty

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INTRODUCTION:

Payers and medical benefit management companies set prior authorization criteria for surgery. Recently, some payers have limited access to total knee arthroplasty (TKA) to patients with Kellgren-Lawrence (KL) grade 4 osteoarthritis only. This study compares the outcomes of patients with KL grade 3 and 4 osteoarthritis after TKA to determine if this new policy is justified.

METHODS:

This was a retrospective study of prospectively collected data from two centers. This was a secondary analysis of a series originally established to collect outcomes for a single, cemented implant. 152 patients underwent primary, unilateral TKA from 2014-2016. Only patients with KL grade 3 (n=69) or 4 (n=83) osteoarthritis were included. Knee Society Score (KSS) and Forgotten Joint Score (FJS) were collected preoperatively and at 6 weeks, 6 months, 1 year and 2 years postoperatively. Power analysis determined that 45 patients per group would reflect a clinical difference in KSS of 6 points at 80% power. Generalized linear models were used to compare outcomes.

RESULTS:

There was no difference in age, gender, ASA score or preoperative KSS between the groups. Patients with KL 4 disease had a higher BMI (33.1±5.0 vs. 30.7±5.0; p=0.004). Controlling for demographics, improvements in KSS were comparable between the groups at all time points. At 2 years postoperatively, there was no difference in KSS (85.1±14.3 vs 86.4±14.3, p=0.610) and FJS (67.1±26.1 vs 74.5±25.2, p=0.114). A similar proportion achieved the patient acceptable symptom state for FJS (91.3% vs. 94.0%) and minimal clinically important difference for KSS (97.1% vs. 93.8%).

DISCUSSION AND CONCLUSION: Patients with KL grade 3 and 4 osteoarthritis experienced similar improvement at all time points up to 2 years after primary TKA. There is no justification for payers to deny access to surgical treatment for patients with KL grade 3 osteoarthritis who have otherwise failed conservative treatment