

Paper #37

High Rate of Early Revision Following Custom Made Unicondylar Knee Replacement

Carl Talmo, MD, Marie C. Anderson, BS, Brian McKeon, MD, Jason Rand, PA, Claire E. Robbins, PT, Eliot Jia, BS

Introduction: There is recent interest in custom knee implants which provide patient specific instrumentation and potentially a better fit of the prosthesis. While many Unicondylar knee replacements (UKR) have demonstrated excellent durable results, there is little evidence on the track-record of newer custom-made implants.

Methods: We performed a retrospective review of all custom medial compartment UKR performed at our institution by a single surgeon from 2008-2014. A detailed review of patient factors, operative reports, clinical/radiographic follow-up was performed. The incidence of revision, radiographic and clinical failures was calculated at a minimum of 2 years. An analysis of risk factors was performed, including side, age, gender, BMI, ROM, and tibial insert thickness. Regression was used to compare continuous variables. Fischer exact test was used to determine correlation of categorical variables to incidence of revision.

Results: 115 consecutive custom medial UKR from a single manufacturer were performed during the study period. At an average of 32 months follow-up, 25 (21.7%) of the UKR had been revised to TKR. Of these revisions, 9 (36%) were revised for loosening of the femoral component, 6 (24%) were revised for loosening of the tibial component, 4 (16%) for loosening of both components, 3 (12%) for osteoarthritis, 2 for infection, and 1 for a dislodged polyethylene insert. Overall, 19 (17%) of the UKR in this series were revised for aseptic loosening and 13 (11.3%) of these involved the femoral component. We found no significant relationship between aseptic or femoral component loosening and any of the study variables.

Conclusion: In this series of custom medial compartment UKR, we found a high rate of aseptic loosening and femoral component loosening at relatively short-term follow-up. While a larger study may help to verify these findings, we recommend careful consideration of use of this implant based on our experience.

Notes
