Long-term PROs for Medial and Posterior-stabilized Knee Implants: Concise 10-year Follow Up of a RCT

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We previously reported the 2-year results of a prospective randomized trial of medial-stabilized (MS) vs posteriorstabilized (PS) total knee arthroplasty (TKA) of the same design. The purpose of the present study was to provide concise follow-up results at 10 years.

METHODS:

The original study included 50 patients (25 MS and 25 PS). Of these, 3 patients died and 3 underwent revision. Of the 44 remaining patients, 31 (70.5%) agreed to long-term follow up, including 14 MS and 17 PS. Patient-reported outcome (PRO) data were collected at an average length of 9.4 ± 0.4 years after index arthroplasty. Collected PROs included PROMIS Pain Behavior, PROMIS Pain Interference, PROMIS Physical Function, IKDC Score, VR-12 Physical Component Score, VR-12 Mental Component Score, Forgotten Joint Score, and Oxford Knee Score. A custom knee function questionnaire was given that assessed satisfaction with weight-bearing in flexion (WBiF) activities vs non-WBiF activities. T-tests and Mann Whitney U tests were performed to compare PROs between prosthesis types where appropriate.

RESULTS:

No significant differences were found in validated PRO measures between the groups (p > 0.05). Long-term patient satisfaction with prosthesis performance in WBiF activities was significantly lower than non-WBiF activities for both MS (r = -0.47, p = 0.012) and PS (r = -0.55, p = 0.001) knees, though patients reported high mean satisfaction rated on a 1 to 10 scale for both activity groups (WBiF: MS=8.3±1.7, PS=8.2±1.8; non-WBiF: MS=9.2±0.7, PS=9.3±1.3).

DISCUSSION AND CONCLUSION:

This 10-year RCT data indicates that arthroplasty surgeons selecting MS or PS implants can expect favorable long-term pain and function outcomes for their patients, without significant difference in validated PROs.

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