

Are Patients More Satisfied with a Balanced TKA?

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Introduction: Studies have shown that as many as 1 in 5 patients is dissatisfied following TKA. The purpose of this study was to determine whether or not patients with a balanced TKA, as measured using intraoperative sensors, exhibit better clinical outcomes.

Methods: 318 patients scheduled for TKA surgery were enrolled in a 6 center, randomized controlled trial, resulting in two patient groups: a sensor-guided TKA group and a surgeon-guided TKA group. Intraoperative load sensors were utilized in all cases, however in one group the surgeon used the feedback to assist in balancing the knee and in the other group the surgeon balanced without load data and the sensor was used to blindly record the joint balance. For this evaluation, the two groups were pooled and categorized as either balanced or unbalanced. Clinical outcomes data were collected at 6 weeks, 6 months and 1 year postoperatively, including Knee Society Satisfaction and the Forgotten Joint Score. Using linear mixed models, these outcome measures were compared between the balanced and unbalanced patient groups.

Results: Of the 318 patients, 208 were balanced and 110 were unbalanced. When correcting for confounding factors, patients with a balanced knee exhibited greater satisfaction at 6 weeks, 6 months and 1 year compared to the patients with an unbalanced knee ($p=0.011$). Similarly, the same cohort of patients with a balanced knee showed a more forgotten joint (higher Forgotten Joint Score) at the same time intervals ($p=0.044$).

Conclusions: As patient reported outcomes become increasingly important for maintaining favorable hospital and provider metrics, it is imperative to find new methods to increase satisfaction levels among TKA recipients. In this study, patients with quantitatively balanced TKA had significantly better KSS satisfaction and forgotten joint scores compared to patients with unbalanced TKA.