



Total Knee Outcomes Correlate Strongly with Spine Disability

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Introduction: As many as 20% of patients are dissatisfied after total knee arthroplasty (TKA), and persistent functional deficits are directly associated with TKA dissatisfaction. Spinal stenosis is a leading cause of functional disability. This study investigates the association of spine disability with poor TKA outcomes and patient dissatisfaction.

Methods: Prospective demographic, health and knee-specific data were collected for 1200 consecutive TKAs between 7/2010 and 7/2012. From this series, a spine questionnaire and the Oswestry Disability Index (ODI) score were obtained for 691 knees. Preoperative and two-year postoperative Knee Society (KS) pain and function scores and Oxford Knee Scores (OKS) were compared for presence of back problems, ODI scores, and demographic data.

Results: 371/691 (54%) TKAs had daily back pain or back pain that limited activity. OKS was significantly worse in patients with vs. without back problems both preop 36.9/34.8 ($p=0.0006$) and postop 20.2/17.0 ($p<0.0001$), but not for improvement 16.7/17.8 ($p=0.10$). KS pain scores were similar for patients with and without back problems both preop and postop. KS function scores were lower in patients with vs. without back problems preop 42.3/47.0 ($p=0.0005$), postop 68.0/79.8 ($p<0.0001$), and for improvement, 25.8/32.9 ($p<0.0001$). Lower KS function was associated with female gender, age, health, and ODI. ODI was associated with OKS ($R=0.57$) and KS function ($R=0.54$).

Conclusion: A majority of TKA patients reported lumbar spine problems. Routine TKA outcome measures were significantly worse in patients with history of back problems and directly associated with ODI, the standard spine disability measure. KS function scores indicated that TKA patients with back problems had worse function before and after TKA with less functional improvement. Poor TKA outcomes and dissatisfaction therefore may reflect poor knee function, spine disability or both. Awareness of coexisting spine disability should guide patient expectations, critical evaluation of registry data, and evaluation of TKA outcomes.