

## FUNCTIONAL IMPROVEMENT UP TO SIX MONTHS AFTER TOTAL KNEE ARTHROPLASTY: MEASURED BY KNEE RANGE OF MOTION AND SELF-REPORTED QUESTIONNAIRE

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The primary aim of this study was to assess knee range of motion (ROM) as well as patients' reported pain, stiffness and function up to six months after total knee arthroplasty (TKA). The secondary aim was to analyze the extent to which knee ROM correlates with patient-rated outcome. A prospective study included 60 patients with primary TKA for osteoarthritis, admitted at Physical Medicine and Rehabilitation Clinic from April 2009 to October 2014. The patients were evaluated at 4 time points: at admission and at discharge, as well as at follow-up at 3 and at 6 months after surgery. The outcome parameters included: active knee ROM, as well as pain, stiffness and function according to self reported Western Ontario and McMaster Universities Osteoarthritis (WOMAC) questionnaire. Statistically highly significant improvement in flexion and extension was observed from admission to all other assessment time points ( $p < 0.001$ ). Also, statistically significant improvement of all three WOMAC subscales (pain, stiffness and function) was found between all assessments points ( $p < 0.001$ ). According to values of Spearman correlation coefficient, there was significant negative correlation of flexion with all WOMAC subscales at all assessment points, whereas correlation of extension with any assessed outcome parameter was without significance.

It can be concluded that in TKA patients all outcome measures improved significantly from admission to 6 months follow-up. Knee flexion ROM negatively and moderately to strongly correlated with pain, stiffness and function, whereas correlation of extension with any assessed outcome measure was without significance. *Acta Medica Medianae* 2015;54(4):52-58.

**Key words:** total knee arthroplasty, functional outcome, knee range of motion