

Initiating Range Of Motion Exercises Within 24 Hours Following Total Knee Arthroplasty Affects The Reduction Of Postoperative Pain: A Randomized Controlled Trial

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Keywords: TKA, RCT, ROM, VAS Score, Rehabilitation.

Background

Postoperative limitations in the range of motion after TKA may occur occasionally and restrict a patient's ADL. Although ROM exercise is a means of increasing the ROM after TKA, the optimal time of initiating ROM exercise is still unclear.

Objectives

The aim of this study is to examine different initiation timings of postoperative ROM exercises after TKA and to compare the results in terms of postoperative pain, swelling, and ROM improvement to determine the optimal time of initiating ROM exercises following TKA.

Study Design & Methods

This was a prospective, single-center, single-blinded randomized controlled trial involving 109 patients scheduled for unilateral TKA. All patients underwent the same rehabilitation program that only differed in the starting time of ROM exercise on postoperative day 1 or day 7. Postoperative assessment was performed with all attending personnel blinded to group assignment. Visual analog scale (VAS) of pain, range of motion (ROM), thigh swelling, the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) score, and adverse outcomes were compared between groups on postoperative days.

Results

VAS scores during the postoperative period from 18 to 72 h were significantly lower in the group with starting time of ROM exercise on postoperative day 1. The ROM, laboratory data, thigh girth, WOMAC and the incidence of complications did not differ between the two groups at any postoperative time-point.

Conclusions

The results of this study suggested that ROM exercises beginning in the early postoperative stage are advantageous in reducing the postoperative pain after TKA.