Paper #4

Physical Therapy on Postoperative Day 0 Following Total Knee Arthroplasty: A Randomized Controlled Trial of 394 Patients

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Introduction: Early mobilization with physical therapy (PT) has been emphasized as a strategy to facilitate early discharge following total knee arthroplasty (TKA). The purpose of this study was to determine whether starting PT the afternoon of postoperative day (POD) 0, instead of starting PT the morning of POD1, could shorten hospital length of stay.

Methods: Patients undergoing TKA were randomized intraoperatively to start PT the afternoon following surgery or the morning of POD1. Hospital length of stay in hours was compared between groups. A post-discharge telephone survey assessed satisfaction with inpatient PT, self-perceived readiness for discharge, and pain on POD0 using 10-point analog scales. A prior sample size calculation suggested that 328 patients were required to show a 4-hour difference in hospital stay between groups; 20% was added for attrition, resulting in 394 patients to be enrolled. Comparisons were made using the non-parametric Wilcoxon rank-sum test; consequently, medians are reported.

Results: Out of 394 patients enrolled and randomized, 378 (95.9%) completed the study. 183 Were randomized to start PT on POD0 and 195 to start PT on POD1. Baseline characteristics did not differ between groups, suggesting appropriate randomization. Hospital length of stay did not differ between groups (intention-to-treat analysis: median of 32.0 hours for POD0 PT versus 31.0 hours for POD1 PT, p=0.646; as-treated analysis: median of 31.0 hours for POD0 PT versus 32.0 hours for POD1 PT, p=0.119). Finally, the two groups did not differ in satisfaction with inpatient PT (10.0 vs. 10.0, p=0.766), patient-reported readiness for discharge at time of discharge (10.0 vs. 10.0, p=0.968), or pain on POD0 (3.3 vs. 4.0, p=0.789).

Conclusions: This randomized trial suggests no difference in length of stay, patient satisfaction, or patient-reported readiness for discharge when PT is initiated on the day of TKA versus the morning after.