Crutch Use for Four Weeks versus One Week following Hip Arthroscopy for Femoroacetabular Impingement: A Randomized Prospective Study with 6-Month Follow Up

Dhruv Sundar Shankar, Edward Stephen Mojica, Anna Marie Blaeser, Kinjal Vasavada[1], Andrew Sheng Bi[2], Thomas Youm

[1]NYU Langone Orthopedics, [2]NYU Langone Health, Department of Orthopedic Surge

INTRODUCTION:

Rehabilitation following hip arthroscopy has a major impact on postoperative outcomes. However, there is a lack of clear guidelines on how to optimize the rehabilitation course, especially the length of time a patient should remain partially weight-bearing (PWB) on crutches. The purpose of our study was to compare patient-reported outcomes (PROs) at 6-month follow up between hip arthroscopy patients on crutches for 4 weeks versus 1 week postoperative.

METHODS: We conducted a randomized prospective trial involving patients who underwent hip arthroscopic procedures at a single center from September 2020 to April 2021. Subjects aged 18-65 years old were randomized to one of two rehabilitation regimens involving either 4 weeks or 1 week of PWB on crutches. Subjects completed the Modified Harris Hip Score (mHHS) and Non-Arthritic Hip Score (NAHS) surveys prior to surgery and at 6-month follow up. The minimum clinically important difference (MCID) and substantial clinical benefit (SCB) were defined as pre-to-postoperative increases in mHHS ≥8.2 and ≥19.8, respectively, while the Patient Acceptable Symptom State (PASS) was defined as postoperative mHHS ≥74. PROs were compared with Mann-Whitney U-test and MCID, SCB, and PASS rates were compared with Fisher's exact test. P-values less than 0.05 were considered significant.

RESULTS: Fifty patients were included in the study of whom 28 (56.0%) were randomized to 4-week crutch use and 22 (44.0%) were assigned to 1-week crutch use. The 4-week crutch use group was significantly older on average (38.4 years vs. 32.1 years; $p = 0.03$) and had significantly higher mean BMI (27.6 vs. 24.5; $p = 0.01$). There was no significant difference in preoperative radiographic characteristics, procedures performed, or mean baseline mHHS (4-week: 53.9, 1-week: 55.4, $p = 0.79$) or NAHS (49.8 vs. 52.3, $p = 0.72$) between the two groups. Significant improvement in mean mHHS and NAHS by 6-month follow up was observed in both groups ($p < 0.001$). There was no significant difference in achievement rates for MCID (92.9% vs. 100.0%, $p = 0.50$), SCB (71.4% vs. 81.8%, $p = 0.51$), or PASS (67.9% vs. 63.6%, $p=0.77$) between the two groups.

DISCUSSION AND CONCLUSION: We identified no significant differences in improvement of mHHS and NAHS or achievement of the MCID, SCB, or PASS at 6-month follow up between patients on crutches for 4 weeks versus 1 week postoperative. Length of crutch use may not be a key determinant of hip arthroscopy outcomes and rehabilitation protocols may be flexible in this regard.