Obesity does not Delay Achievement of the Minimum Clinically Important Difference, Substantial Clinical Benefit, and Patient Acceptable Symptom State Following Primary Hip Arthroscopy for Femoroacetabular Impingement at Two Year Follow-up

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INTRODUCTION: While hip arthroscopic procedures in obese patients have been associated with acceptable functional outcomes, there is concern that obesity may delay achievement of clinical milestones such as the minimum clinically important difference (MCID), the substantial clinical benefit (SCB), and the patient acceptable symptom state (PASS). Our study assessed the impact of body mass index (BMI) on time to achieving the MCID, SCB, and PASS following primary hip arthroscopy for femoroacetabular impingement (FAI).

METHODS: We conducted a retrospective review of patients who underwent primary hip arthroscopy for FAI at our center and had minimum 2-year follow-up. BMI categories were defined as underweight or normal (≤24.9), overweight (25.0-29.9), and obese (≥30.0). All subjects completed the modified Harris Hip Score (mHHS) prior to surgery and at the following timepoints: 6 months (5-11 months), 1 year (12-23 months), and 2 years (24-35 months). MCID and SCB cutoffs were defined as pre-to-postoperative increases in mHHS by ≥8.2 and ≥19.8, respectively. PASS cutoff was set at postoperative mHHS ≥74. Time to achievement of each milestone was compared between BMI categories using the interval-censored EMICM algorithm and generalized log-rank test. The effect of BMI was adjusted for age, sex, and baseline mHHS using an interval-censored proportional hazards model.

RESULTS: 316 patients were included in the analysis with 162 (51.3%) of underweight or normal BMI, 102 (32.3%) of overweight BMI, and 52 (16.5%) of obese BMI. Obese patients had lower mHHS preoperatively ($p = 0.001$) and at 2-year follow-up ($p = 0.007$), but a majority of patients in each BMI category achieved the MCID, SCB, and PASS by 6-month follow-up. Unadjusted analysis found no significant differences between groups in time to achievement for MCID ($p = 0.86$) or SCB ($p = 0.57$) but obese patients had longer time to PASS than low-to-normal BMI patients ($p = 0.03$). However, adjusted analysis did not find obese BMI to be predictive of longer time to PASS compared to underweight/normal BMI ($p = 0.08$).

DISCUSSION AND CONCLUSION: Obesity is not significantly associated with delays in achieving the MCID, SCB, and PASS following primary hip arthroscopy for FAI. Though obese patients should receive appropriate perioperative counseling on weight management, their functional outcomes may nonetheless be comparable to their lower-BMI counterparts.