Preoperative Opioid Use is Associated with Worse Preoperative Patient Reported Outcomes in Hip Arthroscopy Patients

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INTRODUCTION: As hip arthroscopy has dramatically grown in recent years, it is increasingly important to utilize patient reported outcomes (PROs) to help guide clinical practice. Despite the growing literature on hip arthroscopy, there is limited literature on the association between PROs in hip arthroscopy and preoperative opioid usage. The purpose of this study was to evaluate the rate of preoperative opioid usage and its association with preoperative PROs.

A single institution orthopaedic registry was retrospectively analyzed. All patients undergoing hip arthroscopy from 2015 to 2022 were analyzed. Patients were administered the Patient-Reported Outcomes Measurement Information System (PROMIS) in six domains, Numeric Pain Scores, and Musculoskeletal Outcomes Data Evaluation and Management System (MODEMS) Expectations domain preoperatively. Patients' charts were reviewed to determine demographic factors and preoperative opioid use within 6 weeks of surgery. Bivariate analysis was used to determine associations between preoperative opioid use and baseline PROs. Significant bivariate associations were further tested by multivariate analysis to determine independent predictors. RESULTS:

Of the 123 patients included in the study, 21 patients (17%) were taking opioid mediations preoperatively. Prior orthopaedic or other surgeries were significantly associated with preoperative opioid use, but prior hip surgery was not associated (Table 1). Patients with preoperative opioid use scored significantly worse on preoperative PROMIS Physical Function (PF; 38.6 ± 4.9 versus 40.5 ± 6.9 ; p=0.011), Pain Interference (PI; 65.9 ± 8.0 versus 60.2 ± 6.1 ; p=0.0013), Fatigue $(60.7\pm12.4$ versus 51.6 ± 10.1 ; p=0.0051), Social Satisfaction (SS; 38.2 ± 7.6 versus 43.2 ± 7.5 ; p=0.0073), and Depression $(54.2\pm11.0$ versus 48.8 ± 9.0 ; p=0.012) compared to those without preoperative opioid use. Preoperative opioid use was also associated with significantly worse Numeric Pain Scores for both the operative hip $(6.3\pm2.4$ versus 4.6 ± 2.3 ; p=0.0031) and whole body $(3.0\pm2.7$ versus 1.4 ± 2.0 ; p=0.0078) (Table 2). On multivariate analysis, preoperative opioid use was an independent predictor of worse baseline PROMIS PI, Fatigue and SS scores and Numeric Pain Score for the operative hip when controlling for potential confounding variables (Table 3). DISCUSSION AND CONCLUSION:

Hip arthroscopy patients with preoperative opioid use had significantly worse baseline PROs for physical function, pain, social satisfaction, and depression than those who did not use preoperative opioids. When controlling for confounding variables, preoperative opioid use prior to hip arthroscopy was predictive of worse baseline pain, fatigue and social satisfaction PROs scores. Preoperative opioid use should be recognized prior to surgery and its effects on PROs should be

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re-Operative Opioid Jse?	Outcome Measurement	"Yes" N-21	"No" N=102	P value
	PROMIS PF	38.6±4.9	40.5±6.9	0.011
	PROMIS PI	65.9±8.0	60.2±6.1	0.0013
	PROMIS Fatigue	60.7±12.4	51.6±10.1	0.0051
	PROMIS SS	38.2±7.6	43.2±7.5	0.0073
	PROMIS Anxiety	58.6±9.1	55.3±9.2	0.20
	PROMIS Depression	54.2±11.0	48.8±9.0	0.012
	MODEMS Preoperative Expectations	82.9±22.0	89.2±13.4	0.45
	Numeric Pain Score - Operative Hip	6.3±2.4	4.6±2.3	0.0031
	Numeric Pain Score - Whole Body	3.0±2.7	1.4±2.0	0.0078

Factors	Estimate	Std Error	P value
PROMIS PI	2.82	0.77	0.0003
PROMIS Fatigue	3.79	1.24	0.0028
PROMIS SS	-2.56	0.88	0.0045
Numeric Pain Score – Operative Hip	0.77	0.29	0.0089
Variables included in the multivariable lines Surgery, ASA Score, Education, Smoking Sta Bold values indicate statistically significant: Std Error, Standard Error PROMIS, Patient-Reported Outcome Measu PL, Pain Interference	tus, Age, BMI, Gender, with p < 0.05.	Race, and Insurance Sta	