Pre-operative Reduction of Opioid Use Prior to Total Joint Arthroplasty

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Introduction: Opioids are widely used for chronic pain management in patients with osteoarthritis prior to undergoing a total joint arthroplasty (TJA) despite its possible negative impact on outcomes. The purpose of this study was to assess whether weaning of opioid use in the preoperative period would improve TJA outcomes.

Methods: Forty-one patients who had regularly used opioids and successfully weaned (defined as a 50% reduction in morphine equivalent dose) prior to a primary total knee or hip arthroplasty were matched with a group of TJA patients who did not wean. Both groups were compared to a matched control group of TJA patients who did not use opioids preoperatively. Patient-reported outcomes were assessed between six to twelve months post-operatively using the UCLA activity score, SF12v2, and WOMAC. Paired t-tests and ANOVA were performed to assess differences in TJA outcomes.

Results: Patients using opioids who successfully weaned performed significantly better than those that did not wean on WOMAC 43.7 vs 17.8, (P-value < 0.001), SF12v2 physical, 10.5 vs 1.85 (P-value = 0.003), UCLA Activity Score, with a mean delta score of 1.49 vs 0 (P-value < 0.001). There was no statistical difference between the two groups on SF12v2 mental, 2.48 vs 4.21 (P-value=0.409). Patients who successfully weaned from opioids had similar outcomes to control patients who did not use opioids: WOMAC 39.0 vs 43.7, (P-value = 0.31), SF12v2 physical, 12.5 vs 10.5 (P-value = 0.35), SF12v2 mental, 3.08 vs 2.48 (P-value = 0.82), UCLA Activity 1.90 vs 1.49 (p-value=0.23).

Conclusions: Patients with a history of chronic opioid use who successfully decrease their use of opioids prior to surgery had substantially improved clinical outcomes that were comparable to patients who did not use opioids at all. Patients who are on analgesics should be encouraged to wean their use prior to elective TJA.