Efficacy of Multimodal Analgesia Following Hip Arthroscopy

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INTRODUCTION:
Effective pain management following hip arthroscopy is important to improve patient satisfaction and clinical outcomes. The purpose of this study was to determine whether different regimens of multimodal analgesia will reduce post-operative pain scores, narcotic consumption and hospital length-of-stay.
METHODS:
From 2018 to 2021, 132 patients undergoing hip arthroscopy for symptomatic femoroacetabular impingement (FAI) were included in this prospective, single-center randomized controlled trial. Patients were randomized into four treatment groups:
1) Group 1 - Standard of Care (SOC): Opioid medication (Oxycodone-acetaminophen 37.5 mg/500 mg, 1-2 tabs q6H as needed), Heterotopic ossification prophylaxis - Naprosyn 500 mg twice daily x 3 weeks);
2) Group 2 – SOC + Post-operative sleeping aid (Zopiclone 7.5 mg nightly x 7 days);
3) Group 3 – SOC + Pre-operative and post-operative Gabapentin (600 mg orally, 1 hour pre-operatively; 600 mg post-operatively, 8 hours following pre-op dose);
4) Group 4 – SOC + Pre-medicate with Celecoxib (400 mg orally, 1 hour pre-operatively)
The primary outcome was pain measured with a visual analogue scale, monitored daily for the first week and every other day for 6 weeks. Secondary outcomes included narcotic consumption and hospital length of stay.
RESULTS:
Patient characteristics were statistically similar between groups ($p>0.20$). There were no statistically significant differences in pain scores between groups at any timepoint after adjusting for intra-operative traction time, intra-operative narcotic administration and pre-operative pain scores ($p>0.05$). There were also no significant differences in the number of days that narcotics were taken for ($p=0.88$) and the average daily morphine milligram equivalents consumed ($p=0.70$). Similarly, there were no statistically significant differences in length of stay in the experimental groups, compared with the control group ($p>0.05$).
DISCUSSION AND CONCLUSION:
Multimodal analgesia, with the medications included in this study, did not appear to improve post-operative pain scores or reduce length of stay following hip arthroscopy. Research efforts should continue to focus on optimizing pain control in order to reduce the necessity for, and consumption of opioids in the post-operative period.