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Can Opioids be Eliminated After Arthroscopic Meniscus Surgery? A Prospective Randomized Controlled Trial

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Abstract

Purpose: To compare a multimodal nonopioid pain protocol to traditional opioid medication in controlling postoperative pain following arthroscopic meniscal surgery.

Methods: Ninety-nine patients undergoing primary meniscectomy or meniscal repair were assessed for participation. A prospective randomized control trial was performed in accordance with the Consolidated Standards of Reporting Trials 2010 (CONSORT) statement. The two arms of the study included a multimodal non-opioid analgesic protocol and a standard opioid regimen with a primary outcome of postoperative pain level (visual analog scale) for 10 days. Secondary outcomes included patient reported outcomes, complications and patient satisfaction. Randomization was achieved using a random number generator. Patients were not blinded. Data collection was done by a blinded observer.

Results: A total of 61 patients were analyzed with 30 randomized to the opioid regimen, and 31 randomized to the non-opioid regimen. Patients receiving the nonopioid regimen demonstrated non-inferior VAS scores compared to patients who received opioid pain medication ($p>0.05$) No significant differences were found in preoperative (opioid: 58.9 ± 7.0; nonopioid: 58.2 ± 5.5, $p = 0.724$) nor postoperative (opioid: 59.8 ± 6.5; nonopioid: 54.9 ± 7.1, $p = 0.064$) PROMIS-Pain Interference Short Form scores. No difference was found in recorded side effects between both groups: constipation, nausea, diarrhea, upset stomach, and drowsiness ($p < 0.05$).

Conclusion: This study found that multimodal nonopioid pain protocol provided equivalent pain control and patient outcomes following primary meniscus surgery while having an equivalent side effect profile. All patients reported satisfaction with their pain management without requiring emergency opioid analgesia.

Key Terms: nonopioid, multimodal analgesia, pain, meniscectomy, pain control