



ISFAHAN UNIVERSITY OF MEDICAL SCIENCES
SCHOOL OF MEDICINE
ANESTHESIOLOGY DEPARTMENT

Thesis for obtaining the specialty degree in Anesthesiology

Title:

**Comparison the effect of intravenous infusion ketorolac,
paracetamol and parecoxib for postoperative pain in
orthopedic lower limb surgery under spinal anesthesia**

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Abstract

Background: Postoperative pain particularly for orthopedic surgery is one of the concerns of physicians since it causes patient dissatisfaction so this study aimed to compare the analgesic effect of intravenous infusion of ketorolac, paracetamol and parecoxib for postoperative pain in orthopedic lower limb surgery under spinal anesthesia.

Methods: This randomized double-blind clinical trial was done on 140 patients undergoing elective orthopedic surgery of lower extremities. There were 35 patients in each group. In parecoxib group, 20 mg was infused in 20min and then 60mg of Parecoxib, In Ketorolac group, 15 mg Ketorolac was infused in 20min and then 45 mg of Ketorolac, In Paracetamol group 500 mg Paracetamol was infused in 20min, and then 1500 mg of Paracetamol, In placebo group, infusion pump was filled with 100 ml of normal saline as well as the for all groups. The values of VAS, VRS, and the side effects were recorded. Data was analyzed by SPSS 22. using Chi-Square test, one-way ANOVA, and ANOVA.

Results: the mean of pain score was not significantly different among groups (P-value > 0.05). Between Paracetamol and placebo groups pain score was not significantly different. At hours 6 only the difference in the mean of pain between Parecoxib and placebo groups was significant. At hours 12 and 18, the mean of pain score in Parecoxib group was significantly lower than Paracetamol and placebo groups. At hours 24, the mean of pain score in Parecoxib and Ketorolac groups was significantly lower than placebo group.

Conclusion: parecoxib in conjunction with opioids can be used for postoperative pain management and morphine requirement can be reduced as ketorolac as and more than Paracetamol.

Keywords: ketorolac, paracetamol, parecoxib, postoperative pain, orthopedic lower limb surgery

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