

Efficacy of dexmedetomidine as an adjuvant in femoral nerve block for post-op pain relief in hip surgery: A prospective randomized double-blind controlled study

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Abstract

Background and Aims: To determine whether the addition of dexmedetomidine either in peripheral block or via systemic route leads to prolongation of the duration of analgesia is inconclusive. The present study aimed to assess the duration of postoperative analgesia with dexmedetomidine used as an additive with bupivacaine for ultrasound-guided femoral nerve block (FNB) and to compare it with intramuscular dexmedetomidine along with FNB.

Material and Methods: A prospective, double-blind randomized clinical trial involving adult patients undergoing elective hip surgery, performed under subarachnoid block. When sensory block receded to T12 after the surgery, FNB was given for postoperative analgesia. Patients were randomized into three groups; Group A received FNB with 40 mL 0.25% bupivacaine and 0.5 mL saline as IM injection, Group B received FNB with 39.5 mL of 0.25% bupivacaine + 0.5 mL (50 mcg) of dexmedetomidine in the affected limb and 0.5 mL saline IM injection, and Group C received FNB with 40 mL of 0.25% bupivacaine and 0.5 mL (50 mcg) of dexmedetomidine as IM injection. Postoperative pain was assessed and for pain with VAS score >3, intravenous tramadol was given as rescue analgesia. Chi-square test for categorical variables and one-way ANOVA for continuous variables.

Results: The mean duration of analgesia in groups A, B, and C was 671, 676, and 490 min, respectively which was not significant. A 24 h analgesic requirement was also not different between the groups.

Conclusion: The use of dexmedetomidine perineurally or systemically did not prolong the duration of analgesia as compared to bupivacaine alone for femoral nerve block.

Keywords: Bupivacaine, dexmedetomidine, hip surgery, postoperative pain, USG-guided femoral nerve block

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