

Abstract

Background: in this trial the effects and complications of intravenous Midazolam and intravenous ketamine as adjuvant therapy on Caudal anesthesia with bupivacaine 0.5% in lower abdominal surgery has been evaluated.

Material and methods: Our study was double-blind clinical trial. 90 neonates from 1-3 months of age (ASA 1-2) have been divided into 3 groups of 30 persons. In the first group (1) they received caudal bupivacaine 0.5% and second group (2) received caudal bupivacaine plus intravenous midazolam as adjuvant therapy. The last group (3) received intravenous midazolam & ketamine as adjuvant therapy.

Results: average caudal block success rate was 87% in all three groups. The mean systolic diastolic blood pressure and heart rate at time scales of 0, 20, 40 & 60 min. in three groups have no significant difference ($p > 0.05$). Upon the NIPS, the pain score more than 3 in three groups in the three time scales (0, 20, 40, 60, 120) there were no significant differences. 6 patients in min. 30, 6 patients in min. 60 & 14 in min. 120 had pain scale more than 3. No complications were seen in any of the three groups.

Conclusion:

1: Applying intravenous midazolam and ketamine as pre-treatment to caudal anesthetic block with bupivacaine in awake (preterm & low birth weight) neonates in order to reduce pain has no significant effects.

2: Caudal anesthesia can reduce apnea and other G.A. related complications in preterm and low birth weight neonates and is an advantage for feeding babies as soon as after procedure.