

ABSTRACT

BACKGROUND:

Caudal anesthesia is widely used as intraoperative and postoperative analgesia in children for infraumbilical surgeries to reduce stress response to surgery and to facilitate general anesthesia.

AIM OF THE STUDY:

The Aim of the study is to compare the effects of caudal Bupivacaine 0.25%, Levobupivacaine 0.25% and Ropivacaine 0.25% in children undergoing lower abdominal surgeries. Primary outcome measured the degree of analgesia and motor blockade postoperatively. Secondary outcome measured the hemodynamic parameters and adverse effects.

MATERIALS AND METHODS:

This is a prospective, randomized, single blinded study included 75 patients. Patients were divided into 3 groups. L (levobupivacaine) 1ml/kg 0.25%, B (bupivacaine) 1ml/kg 0.25%, and R group (ropivacaine) 1ml/kg 0.25%. Postoperative pain was assessed by CHILDREN AND INFANTS POSTOPERATIVE PAIN SCALE (CHIPPS) and motor block by BROMAGE SCALE.

RESULT:

The mean duration of analgesia for Bupivacaine group is 6.06 hours; Levobupivacaine group -5.91 hours and ropivacaine group, 5.85 hours. The difference is statistically insignificant ($p=0.412$). The mean duration of motor blockade in Bupivacaine group is 2.3 hours whereas in Levobupivacaine it is 1.51 hours and in Ropivacaine group it is 1.39 hours which is significant statistically with a p value of 0.001. There is no difference with respect to hemodynamic changes within the three groups.

CONCLUSION:

The study result concludes that caudal Levobupivacaine (0.25%) and Ropivacaine (0.25%) provides an equally effective postoperative analgesia in children, with a lesser degree of motor blockade and an increased safety margin when compared with Bupivacaine (0.25%), facilitating them a suitable agent for day care surgery.

KEY WORDS:

Caudal, Levobupivacaine, Bupivacaine, Ropivacaine, CHIPPS, Bromage score