



Increasing the Effectiveness of Caudal Anesthesia by Combining Ropivacain with Dexamethasone in Surgical Interventions in Children

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Keywords

Caudal anesthesia; Ropivacaine; Dexamethasone

Editorial

Now caudal anesthesia is the most simple, effective and safe technique used in pediatric surgery. Optimization of caudal anesthesia by combining ropivacaine with dexamethasone. The study included 152 children aged 0 to 13 years with inguinal and umbilical hernia, cryptorchidism, paraphimosis, hypospadias, malformation of the anus and rectum, malformations of the pelvic bones, hips, or lower limbs. All patients were divided into 2 groups: in group I (n=76), the caudal block was administered only with ropivacaine at a rate of 3 mg/kg in dilution with 0.9% NaCl in a dilution of 1:1; in the second group (n=76)-ropivacaine 2.8 mg/kg+dexamethasone 0.1 mg/kg+0.9% NaCl in the dilution 1:1. Premedication in both groups was standard and was performed with midazolam at a rate of 0.4 mg/kg per os. Propofol 3 mg/kg was injected intravenously on the operating table. Then, after full sleep, the patient was administered a caudal block. In our daily practice, we used the technique of the caudal block "without turning the needle", which consists in puncturing the sacrococcygeal ligament at an angle of 60° without holding the needle into the caudal canal. During the entire operation, sedation was carried out by infusion of propofol 3 mg/kg/h. During the caudal block, there were no serious complications. Throughout the operation in patients of both groups, hemodynamic parameters were stable. The main differences were found in the postoperative period. So, 8 hours after the operation in Group I patients (caudal block only with ropivacaine), hemodynamic parameters increased by 35.7% and in the evaluation of postoperative pain on the Hannalah scale the score exceeded 7 to 8. And in group II patients (caudal block of ropivacaine+dexamethasone), the hemodynamic parameters remained stable and the score on the Hannalah scale did not exceed three points, even 16 to 24 hours after the operation.

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Conclusion

Caudal anesthesia with ropivacaine is a highly effective, reliable and safe method of anesthesia for surgical interventions below the navelin children. The combined administration of dexamethasone and ropivacaine in the caudal canal prolonged the analgesic effect up to 24 hours after the operation, which was confirmed by the stability of the hemodynamic parameters and the Hannalah scale.