



COMPARISON OF ANALGESIC EFFICACY OF CAUDAL DEXMEDETOMIDINE AS AN ADJUVANT TO BUPIVACAINE VERSUS CAUDAL BUPIVACAINE IN PEDIATRIC INFRAUMBILICAL SURGERIES

Anaesthesiology

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ABSTRACT

Introduction: Caudal epidural analgesia is regional block technique in children undergoing infraumbilical surgeries but has a short duration of action after single shot local anaesthetic injection. This study is designed for the comparison of caudal dexmedetomidine and Bupivacaine in combination to caudal Bupivacaine for paediatric infra

followed by the whoosh test using 0.5 ml of air. Assistant who was not involved in the study, who prepared drug solution as above, handed over an unlabeled syringe for caudal. 1 ml/kg of study solution was administered slowly, while monitoring vital signs and ECG. The intraoperative monitoring and postoperative observation were done by an experienced anaesthesiologist. The time of caudal block was recorded, and the surgery was allowed to start 10 min after caudal injection. All the patients were monitored by a standard protocol in a uniform pattern during anaesthesia and surgery. Continuous monitoring of vital parameters - heart rate (HR), ECG, respiratory rate, NIBP, SpO₂ - was done, and values were recorded before and after pre-medication, induction, caudal block, after incision and thereafter every 10 min until the surgery was over.

Post operatively hemodynamics, pain intensity by FLACC score, sedation score, and side effect were observed at every 15 minutes till 2 hours, then every 2 hourly till 12 hours and then 24th hour.

Any side effects such as breath holding/apnoea, hypotension, involuntary movements, nausea and vomiting were noted. The occurrence Significant bradycardia requiring intervention was defined as fall in heart rate more than 20% from base line and was planned to treat with injection. Atropine 0.02 mg/kg. Significant hypotension requiring treatment was defined as more than 20% fall in Systolic blood pressure from baseline or systolic blood pressure less than 90 mm Hg, and was planned to treat with intravenous fluid bolus 10ml/kg 0.9% normal saline.

Parameters To Be Observed

- Duration of surgery
- Duration of sensory blockade (time of sensation of first pain) and Time of giving first rescue analgesia.
- Complications (if any arise)

At 8 hours only 1 child in group A needed rescue analgesia out of 29. Remaining 28 patients were free of pain.

At 12 hours 5 out of 28 had pain and 23 children had lower FLACC score.

At the end of 16 hours 17 patients had received rescue analgesia indicating that the Dexmedetomidine group had maximum of 14 hours analgesia compared to 6 hours of analgesia with plain Bupivacaine.



GRAPH 2: FLACC score in Group A

