POSTER SESSION VIII

A757

TITLE: AXILLARY BRACHIAL PLEXUS BLOCK FOR EMERGENCY PROCEDURES IN YOUNG CHILDREN

AUTHORS: M. Tryba, K. Haensch, M. Zenz
AFFILIATION: Dept. Anesthesiology, Intensive Care Medicine and Pain Therapy, University Hospital Bergmannsheil, Bochum, F.R.G.

Introduction: Although regional anesthesia is a standard technique in many hospitals, most anesthesiologists believe that regional anesthesia is contraindicated in youngchildren. Only few reports exist about the use of peripheral nerve blocks as the sole anesthetic technique in children. Peripheral nerve block is the anesthetic technique of choice in patients at risk of aspiration. Injuries of the upper limbs are a frequent cause of emergency operations in children. Axillary brachial plexus block is a suitable anesthetic technique for such procedures. We therefore investigated the acceptability, safety, suitability and the success rate of the axillary brachial plexus block for emergency procedures in children.

Methods: After institutional approval all children ≤ 12 y. with emergency operations of the upper limb were included in the study. A total of 64 consecutive children were included in the study.. Fifty parents (78 %) accepted the regional anesthesia and gave their written consent. No premedication was administered. 47 blocks were performed with the parents present. Prilocaine 1 % was used as the sole local anesthetic in all children. The injected local anesthetic volume ranged from 0.7 - 1.1 ml / kg b.w. (7 - 11 mg / kg prilocaine). All blocks were performed with a 24 G needle.

Results: In 36 children the operation was performed because of a fracture, in 14 cases because of soft tissue injuries. 38 operations were finished within 60 min, further ten within two hours and two lasted more than two hours. The mean age of the children was 8.5 ± 2.6 y (range 3 - 12). All children accepted the procedure. 49 blocks (98 %) were successful. In 5 patients systemic analgesics were administered, mainly because of tourniquet pain. Only one patient required general anesthesia because of complete failure of the block. 34 children could be operated without any additional sedation. In eight children 1 mg midazolam was administered, three children required 0.25 - 0.5 mg / kg ketamine and four children with long lasting procedures required 1 mg midazolam + 0.5 mg / kg ketamine. There was no correlation between the age of the children and the frequency of sedation (Table). No significant side effects could be observed.

Age (y)	Patients (N)	Frequency of Sedation (%)	
3 - 6	14	29	
7 - 9	14	43	
10-12	21	28	(+ 1 GA)

Discussion: Axillary brachial plexus block proved to be a simple and safe regional anesthetic technique with a high success rate even in young children. In emergency situations axillary plexus block almost eliminates the risk of pulmonary aspiration and therefore improves the safety of anesthesia.

A758

TITLE: EFFECT OF KETOROLAC ON THE POSTOPERATIVE OPIOID REQUIREMENT AND RECOVERY PROFILE

AUTHORS: RK Parker, D.O., B Holtmann, M.D., PF White, Ph.D., M.D.
AFFILIATION: Department of Anesthesiology, Washington University, St. Louis, MO 63110

Ketorolac (Toradol®) is a parenterally-active non-narcotic analgesic, reported to be as effective as morphine and meperidine in managing postoperative pain.[1,2] It has been suggested that the use of ketorolac may decrease the incidence of opioid-related side effects. We designed a randomized, double-blind study to examine the effect of ketorolac on the postoperative morphine or meperidine requirements and the recovery profile.

80 consenting ASA I-III women undergoing abdominal hysterectomy operations were randomly assigned to one of four treatment groups according to an IRB-approved protocol. All patients received a standardized anesthetic technique. However, 30- 45 min prior to skin closure, patients received an intravenous injection of either ketorolac 60 mg (in 20 ml of saline), or a saline placebo (20 ml). Patients received either morphine or meperidine for postoperative analgesia using a patient-controlled analgesia (PCA) system. Patients in the two ketorolac groups received 30 mg iv in 20 ml of normal saline every 6 h until they were taking oral fluids. In the control group, patients received 20 ml of normal saline every 6 h. Postoperative assessments included opioid requirement, side effects, nocturnal awakenings, recovery times, and 100 mm visual analog scales for pain, sedation, anxiety, and fatigue. Data were analyzed with ANOVA and Chi-square tests, with $p<0.05$ considered significant (*).

The four groups were comparable with respect to demographic data. Ketorolac significantly decreased the postoperative opioid dosage requirements (figure). Surprisingly, the incidences of common side effects and early recovery times were similar (table). However, the ketorolac-treated (vs saline) group resumed bowel function sooner and these patients were discharged significantly earlier.

In conclusion, these data would suggest that ketorolac exerts an opioid-sparing effect which may contribute to an earlier discharge after lower abdominal surgery.

References
1. Clin Pharmacol and Ther, 1987;41:212
2. Anaesthesia, 1987;42:727-73

Recovery times and side effects

	Opioid Alone	Ketorolac/Opioid
Ambulation (h)	22±2	22±5
Bowel function (h)	57±27	44±16*
Oral intake (h)	54±27	47±18
Discharge (h)	137±33	106±25*
Nausea (%)	66	57
Vomiting (%)	11	11
Pruritis (%)	28	27