TITLE: INTRAOPERATIVE AND POSTOPERATIVE ANALGESIA IN CHILDREN UNDERGOING INGUINAL HERNIORRHAPHY: A COMPARISON OF CAUDAL BUPIVACAINE 0.125% AND 0.25%

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This study examines intraoperative adjunct anesthesia/postoperative analgesia when bupivacaine (0.125 vs. 0.25%) is used for caudal blocks in children undergoing inguinal herniorrhaphy on an ambulatory basis.

METHODS: Institutional approval and parental consent were obtained to study 24 children 18 mos.-12 yrs. undergoing inguinal hernia repair. Anesthesia consisted of N_2O/O_2/halothane administered by face mask. Children received a caudal block with either 0.25% or 0.125% bupivacaine (0.75 ml/kg) in a double blind fashion prior to the beginning of surgery. Adjustments of halothane concentration were made based on patient movement or changes in vital signs (± 20% of baseline). Post operative pain scores, halothane MAC-minutes, time to first movement, time to meet discharge criteria were all recorded. Hoteling's T2 analysis was used to compare the 2 groups with respect to the postoperative pain scores, and the student's t-test was used to compare age, duration of anesthesia and surgery, MAC-minutes, time to ambulation, and time to meet discharge criteria.

RESULTS: Both groups were comparable with regards to age and the duration of anesthesia and surgery. No statistically significant differences were noted between the groups in intraoperative halothane requirements (MAC-minutes), time to awaken, or postoperative pain scores. The time to stand and the time to meet discharge criteria were shorter in patients who received the less concentrated solution. There were no anesthetic complications.

Variable (mean ± SD)	Group 1 Bupiv 0.25% (n=11)	Group 2 Bupiv 0.125% (n=13)	P
Age (yrs)	4.23±1.10	3.81±1.90	>.5
Time Anesth (mins)	56.6±20.5	53.3±9.7	>.6
Time Survey (mins)	28.6±17.4	27.8±10.2	>.8
Time Awaken (mins)	3.36±2.01	4.85±2.48	>.12
MAC-minutes	51.1±31.7	46.8±19.19	>.6
Time Stand (mins)	82.7±41.1	40.8±36.9	=.015
Time Discharge (mins)	104.0±32.5	83.7±20.9	=.077

DISCUSSION: The results of this study show that caudal bupivacaine 0.125% and 0.25% given after the induction of anesthesia but prior to the onset of surgery are equally effective in providing adjunct intraoperative analgesia and postoperative pain relief following outpatient inguinal herniorrhaphy. Time to ambulation and time to meet discharge criteria were shorter with the lesser concentration of bupivacaine. Bupivacaine 0.125% seems more appropriate for use in ambulatory patients.

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TITLE: PROPOFOL VS MIDAZOLAM FOR SEDATION: A COMPARISON OF RECOVERY PARAMETERS

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INTRODUCTION: Propofol (P) is being used increasingly for monitored sedation. This IRB-approved study compares the quality of recovery from P against midazolam (M), the most commonly-used drug for sedation.

METHODS: 57 consenting ASA 1-3 patients undergoing vascular access under local analgesia were sedated to eye-closing while retaining verbal responses to commands. They were randomly assigned to one of three groups: Group MDZ received M, 0.02 mg/kg IV, Group PB received P, 0.75-1.0 mg/kg IV (with incremental doses of 1/4 of initial dose); Group PI received P, 0.75-1.0 mg/kg IV followed by an infusion at 2-4 mg/kg/hr. Recovery was assessed as follows: the time from last dose to eye opening, both spontaneously and on command; ability to give date of birth; Aldrete score and digit symbol substitution test (DSST). Amnesia was tested by picture recall before and after surgery. Side effects were recorded immediately and at 24 and 48 hr postop. Data were compared using Chi-Square and Student's t-test.

RESULTS: The results are summarized in the table. Postop recovery occurred earlier with P than M. Amnesia, however, was greater with M. Patients who received P infusion recovered earlier and had higher scores than the bolus group. There was no difference in side effects between the three groups. We conclude that infusion of P is preferable to bolus administration and that recovery from P sedation is faster than from M sedation.

RECOVERY ROOM SEDATION

	MDZ	P BOLUS	P INFUSION
SEDATION	N=19	N=19	N=19
SEO (MIN)	23±2SE	16±2SE*	7±1SE*+
RVC (MIN)	22±2SE	15±2SE*	5±1SE*+
ORIENT (MIN)	24±2SE	17±2SE*	9±2SE*+
ALDRETE	10	16*	19*+
DSST	13	13	12
PIC RECALL	10	17*	18*+
SED SCORE	11	17*	19*+

SEO=Spontaneous Eye Opening
Orient=Oriented to time & place
RVC=Responds to Verbal Commands
Aldrete=# pts scored 10 on floor entry
DSST=# pts achieving 10% of baseline score
Pic Recall= # pts recalling all pictures
Sed Score= # pts w/score of 1 on floor entry
* P< 0.03 vs MDZ + PI< 0.01 vs PB