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INTRODUCTION

Peripheral nerve blocks in children undergoing orthopedic procedures provide postoperative analgesia, reduce opioid consumption, decrease time to discharge, and minimize exposure to general anesthesia.

In patients undergoing hip surgery, lumbar plexus block may be advantageous compared to other blocks because it is the most reliable method of blocking the lateral femoral cutaneous, femoral, and obturator nerves.

This study evaluated whether lumbar plexus block offers advantages over caudal epidural blockade in children undergoing elective hip surgery by comparing perioperative and postoperative opioid consumption and postoperative pain scores.

TABLE

Characteristics and outcomes in pediatric patients undergoing elective hip surgery according to type of regional block (N=28)

Characteristics	Type of regional block		P
	Lumbar plexus (N=11) Median (IQR)	Caudal block (N=17) Median (IQR)	
Age (years)	2 (1, 2)	1 (1, 2)	0.543
Height (cm)	89 (81, 92)	81 (78, 87)	0.171
Weight (kg)	13 (12, 13)	11 (11, 12)	0.009
Body mass index (kg/m ²)	15 (15, 18)	17 (14, 18)	0.924
Intraoperative narcotics (ME)	0.3 (0.2, 0.6)	0.7 (0.5, 0.8)	0.051
Postoperative narcotics (ME)	0.1 (0, 0.4)	0.3 (0, 0.3)	0.323
Median pain score	0 (0, 1)	1 (0, 2)	0.266

METHODS

Retrospective study using electronic records

Age: 1 month to 17 years

Procedure: Elective hip surgery under general anesthesia
Comparison: Single-shot lumbar plexus block or caudal epidural block

Primary outcome evaluated: Total dose of intraoperative and postoperative opioid within 24 hours after surgery. Opioid consumption was converted to oral morphine equivalents (ME) and assessed.

Secondary outcomes evaluated: Median pain scores at PACU admission, PACU discharge, and at 2-hour intervals for first postoperative 24 hours. Variables were compared across anesthetic block type using Wilcoxon rank-sum tests.

RESULTS

Twenty-eight patients were included in study.
(Median age 1 year; median weight 11 kg)
Eleven patients received lumbar plexus block.
Seventeen patients received caudal epidural block.

Intraoperative opioid use

0.3 mg/kg of oral ME in the lumbar plexus group versus 0.7 mg/kg in caudal block group.

Postoperative (including PACU) opioid use

0.1 mg/kg of oral ME in lumbar plexus group versus 0.3 mg/kg in the caudal group during the first 24 postoperative hours.

Median pain score

Lumbar plexus group - 0 versus caudal group -1

Characteristics and outcomes are compared in the **Table**.

DISCUSSION

Intraoperative opioid consumption in caudal epidural block group was more than twice that in lumbar plexus block group.

No significant differences were observed in postoperative opioid use or median pain scores according to type of regional block.

A larger retrospective or a prospective study may be required to further define postoperative efficacy between caudal epidural block and lumbar plexus block for postoperative analgesia.

REFERENCES

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