

## Anésthésie pédiatrique: Douleurs

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### Postoperative pain after hypospadias surgery: bilateral pudendal nerve block versus caudal epidural blockade

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#### Position du problème et objectif(s) de l'étude:

The caudal epidural blockade (CEB) is commonly used in pediatric patients undergoing genitourinary surgery. The bilateral pudendal nerve block (PNB) was recently shown to provide adequate postoperative analgesia. The aim of the study was to compare the effect of PNB to CEB on postoperative pain after hypospadias surgery.

#### Matériel et méthodes:

Local ethics committee approval and parental informed consent.

Randomized single-blinded trial, including children (6 months-10 yo) scheduled for hypospadias surgery. Standardized anesthesia protocol (sevoflurane, IV access, propofol 3 mg/kg, fentanyl 2 µg/kg, intubation). Patients were randomly allocated to receive either a bilateral PNB (nerve stimulator technique, bupivacaine 0.5% 0.2ml/kg: PNB group) or a CEB (landmark technique, bupivacaine 0.25% 1ml/kg: CEB group).

Post-operative pain was assessed using CHEOPS score at 30 min, H1, H2, H6, H12, H18 and H24. IV Paracetamol was administered if CHEOPS >7 and nalbuphine was administered for persistent pain. Our primary outcome was time to first analgesia request. Our secondary outcomes were postoperative doses of paracetamol and nalbuphine used during the first 24h, CHEOPS scores and complications of each technique. Chi-square and Mann Whitney tests were used in statistical analysis,  $p < 0.05$  was considered as statistically significant.

#### Résultats & Discussion:

At this point, 49 patients were included in our study: 23 in CEB group and 26 in PNB group. The two groups were comparable regarding demographic and anthropometrical characteristics as well as surgeon grade and duration of surgery. We reported no complication related to the blockade in our study. Our outcomes in terms of analgesia are resumed in table 1.

#### Conclusion:

Although CHEOPS score was slightly higher in PNB group at H6, our primary results tend to show that PNB and CEB offer similar outcomes in pain control after hypospadias surgery. Regarding the safety and effectiveness of this technique, PNB may be preferred to CEB.

Table 1: Comparison of analgesia outcomes			
	PNB (N=26)	CEB (N=23)	P
Time to first analgesia request (min)	420±137.5	450±107.4	0.46
CHEOPS at 30 min	5±0.8	4.7±0.7	0.31
CHEOPS at 1 hour	5.1±0.8	4.9±0.7	0.29
CHEOPS at 2 hours	5.6±1.3	4.8±0.8	0.19
CHEOPS at 6 hours	5.5±0.9	4.4±0.5	<b>0.02</b>
CHEOPS at 12 hours	4.7±1.2	5±1.4	0.8
CHEOPS at 18 hours	5.5±1.7	4.3±0.6	0.32
CHEOPS at 24 hours	4.4±0.8	5±1	0.44
Number of paracetamol boluses			
0 Paracetamol boluses	2 (11.8%)	0 (0%)	0.15
1 Paracetamol bolus	20 (64.7%)	22 (93.8%)	
2 Paracetamol boluses	4 (23.5%)	1 (6.2%)	
Number of nalbuphine boluses	--	--	--

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