

Saddle Block with Intrathecal Morphine for Analgesia Following Penile-Inversion Vaginoplasty: A Retrospective Study

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INTRODUCTION

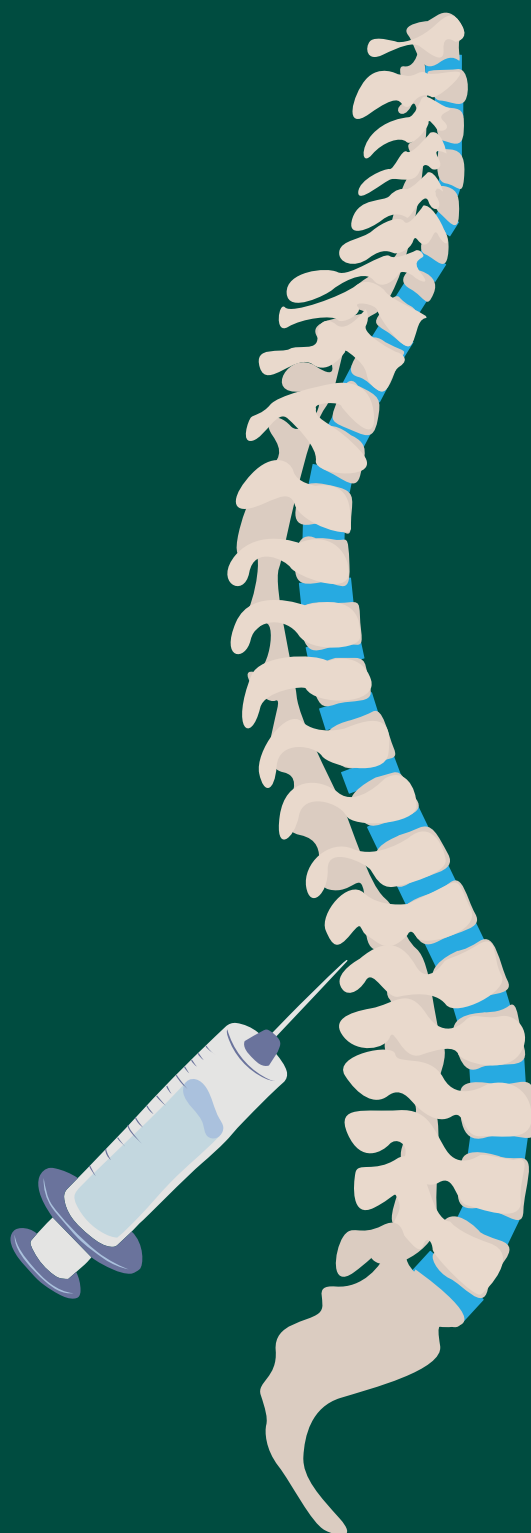
- **Penile-inversion vaginoplasty (PIV)** is a gender-affirming surgery associated with significant postoperative pain.
- **Pain management challenges:** Higher rates of depression, anxiety, and chronic pain among the transgender population.
- **Regional anesthesia** has shown efficacy in similar surgeries, but its use in PIV is underexplored.

METHODS

- **Study Design:** Retrospective, single-center study at Women’s College Hospital in Toronto (Feb 2022 - Apr 2024).
- **Participants:** 72 transgender females undergoing PIV.
 - **Group 1:** 30 patients received saddle block + IT morphine.
 - **Group 2:** 42 patients received standard analgesia.
- **Primary Outcome:** Cumulative opioid consumption in the first 24 hours.
- **Secondary Outcomes:**
 - Postoperative pain severity.
 - Time to first opioid request.
 - Duration of stay in PACU.
 - Opioid- or block-related side effects.
- **Saddle Block Protocol:** 0.75% hyperbaric bupivacaine and 100 mcg IT morphine.

RESULTS

- **No difference** in **cumulative opioid consumption** at 24 hours between groups.
- **Significant improvements** in short-term **postoperative pain outcomes**:
 - **Lower pain severity scores** (mean and maximum) in the recovery room.
 - **Delayed time to first opioid request.**
 - **Shorter duration** in the PACU.
- **No significant differences** in **nausea/vomiting** rates between the two groups.
- **No complications** related to saddle block technique.



Saddle block with intrathecal morphine significantly improves short-term postoperative pain outcomes in patients undergoing penile-inversion vaginoplasty



No reduction in overall opioid consumption, but lower mean and maximum pain scores, delayed time to first analgesic request, and shorter PACU stay

RESULTS

	No SB (n=42)	SB (n=30)	P-value
Total 24h opioid (mg)	17.7 [5.6, 30.8]	12.5 [7.5, 22.5]	0.249
Total intraoperative opioid (mg)	21.0 [15.0, 30.0]	16.5 [12.0, 28.5]	0.370
Total in-hospital opioid (mg)	38.5 [15.0, 80.0]	32.5 [15.0, 67.5]	0.855
Time to first opioid request (min)	68.5 [46.5, 439.0]	482.5 [188.5, 1053.0]	0.047*
No opioid request	8 (19.0)	2 (6.7)	0.249
Duration of PACU stay (min)	125.5 [106.5, 169.5]	96.5 [79.0, 117.5]	0.001*
Duration of postoperative hospital stay (days)	2.9 [2.8, 2.9]	2.8 [2.8, 2.9]	0.307
Mean NRS in PACU	1.7 (1.6)	0.9 (1.4)	0.026*
Maximum NRS in PACU	3.0 (2.4)	1.5 (2.1)	0.014*
Mean NRS during first 24h	2.4 (1.4)	1.8 (1.3)	0.101
Maximum NRS during first 24h	5.2 (2.3)	4.7 (1.9)	0.284
Mean NRS throughout hospital stay	2.4 (1.5)	1.8 (1.3)	0.124
Maximum NRS throughout hospital stay	5.7 (2.3)	5.5 (1.8)	0.793
Nausea	18 (42.9)	19 (63.3)	0.140
Vomiting	7 (16.7)	11 (36.7)	0.098

*p<0.05
Opioid consumption presented as intravenous morphine equivalent (mg).
Data are presented as mean (standard deviation), median [interquartile range], or n (%).
Abbreviations: NRS, Numeric Rating Scale (/10); PACU, Post-Anesthetic Care Unit; SB, Saddle block.

DISCUSSION

- Our findings suggest that a **saddle block with IT morphine** resulted in **clinically significant improvements in short-term postoperative pain control**.
- While there were **no significant changes in opioid consumption**, the saddle block's **short-term benefits in pain management and recovery** suggest a promising analgesic approach for PIV.
- **Further prospective randomized controlled trials are needed** to validate these findings.
- Limitations of this study include its **retrospective design**, the **small sample size**, and **variability in the saddle block protocol**.



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