Ilioinguinal Nerve Block for Post-Cesarean Delivery Pain Control: A Systematic Review

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Introduction:

* **Cesarean sections** are among the most performed surgical procedures worldwide. They are often associated with **significant postoperative pain**, which can:
– Delay maternal **mobilization**
– Disrupt **mother-infant bonding**
– Increase the risk of **chronic postsurgical pain**

Ilioinguinal nerve blocks have been proposed to manage post-cesarean pain and reduce analgesic requirements. However, their **comparative effectiveness** against other pain control strategies remains unclear.

This **systematic review** aims to evaluate the current evidence on the efficacy of **ilioinguinal nerve blocks** in managing pain after cesarean delivery.

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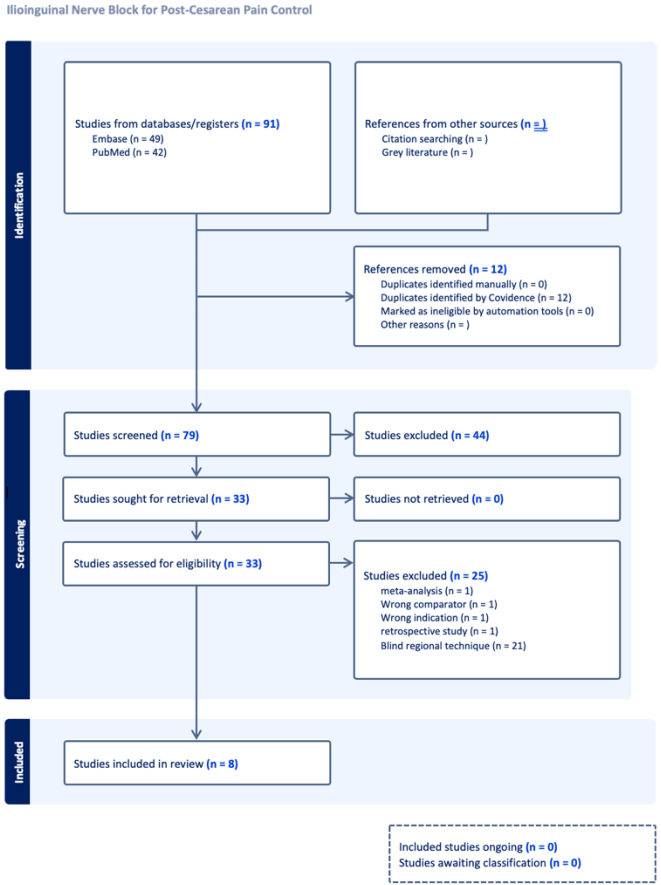
Methodology:

- A systematic review was conducted following PRISMA guidelines.
- **Databases searched**:
  - PubMed
  - Embase
  - Cochrane Library
- **Search period**: From inception to December 2024.
- **Inclusion criteria**:
- English-language studies
- Randomized controlled trials (RCTs)
- Use of ultrasound-guided ilioinguinal nerve blocks for cesarean delivery
- **Study selection process:**
- Two independent reviewers screened and selected articles
- Risk of bias was assessed using the Cochrane Risk of Bias Tool.
- **Outcomes evaluated:**
- Postoperative pain scores. • Time to first required analgesic
  • Total analgesic consumption • Adverse events



Results

•Ilioinguinal nerve blocks (IIH) demonstrated varying degrees of efficacy compared to other regional anesthesia techniques for post-cesarean analgesia.

The time to first rescue analgesic was generally longer in the IIH groups, indicating prolonged pain relief. Mamatha (2022) reported a significantly longer time in the IIH group (17.8 ± 9.5 hr) versus the TAP block (12.1 ± 7.3 hr). Similarly, Elahwal (2022) showed a time of 12.3 ± 9.9 hr for IIH compared to 3.8 ± 1.1 hr for the control group. In Panda (2023), IIH outperformed TAP (11.2 ± 1.0 hr vs. 7.3 ± 0.6 hr).

Analgesic consumption was lower in most IIH groups. Mamatha (2022) showed fewer analgesic doses in the IIH group (0.55 ± 0.72) compared to TAP (1.17 ± 0.75). Rao (2024) reported lower consumption with the QL and TAP blocks

Adverse Effects: Nausea incidence was notably lower in the IIH group (21.9%) compared to the control (71.9%) in Elahwal (2022), suggesting a possible reduction in opioid-related side effects.

Study	Group	Time to First Rescue Analgesic (hr)	Analgesic Consumption	Nausea (%)
Mamatha (2022)	IIH Block (31)	17.806 ± 9.547	0.55 ± 0.723 (number)	
	TAP Block (31)	12.133 ± 7.351	1.17 ± 0.747 (number)	
Elahwal (2022)	IIH Nerve Block Group (32)	12.25 ± 9.886	4.53 ± 1.456 (mg)	21.9
	Control Group (32)	3.81 ± 1.061	8.87 ± 2.013 (mg)	71.9
Vallejo (2012)	Group A (17)		5.21 ± 8.56 (morphine equivalents)	
	Group B (16)		3.75 ± 3.30 (morphine equivalents)	
	Group C (17)		3.55 ± 3.24 (morphine equivalents)	
Kiran (2017)	IIH Block (30)	330 ± 189		
	TAP Block (30)	409 ± 206		
El-Amrawy (2024)	ITAP Block (105)	13.15 ± 1.85	3.50 ± 3.02 (mg)	
	TAP Block (105)	10.06 ± 1.61	8.97 ± 4.13 (mg)	
Rao (2024)	Group T (30)	20.10 ± 2.28	1.10 ± 0.50 (number of analgesic doses)	
	Group Q (30)	21.28 ± 2.46	0.70 ± 0.24 (number of analgesic doses)	
	Group I (30)	16.57 ± 2.45	2.17 ± 0.65 (number of analgesic doses)	
Peddi (2022)	IIH TAP Block (20)			
	QL Block (20)			
Panda (2023)	IIH Block (35)	11.19 ± 0.99	1.60 ± 0.65 (number bolus doses analgesics)	
	TAP Block (35)	7.31 ± 0.63	2.68 ± 0.52 (number bolus doses analgesics)	

These findings support the potential benefit of IIH blocks in prolonging postoperative analgesia and reducing analgesic use, with fewer adverse events in some studies. However, outcomes varied depending on the comparator technique, and some studies favored TAP or QL blocks in specific metrics.