

Low Dose Intrathecal Morphine is Inferior for Post-Cesarean Analgesia



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Background

- Intrathecal morphine (ITM):
 - ↓ cumulative opioids^{1,2},
 - Superior to regional^{4,5}
- ITM doses from 25 - 500 mcg have been studied^{1,2,3}
- Higher doses:
 - Lengthen analgesia^{1,3}
 - ↑ pruritis
 - ↑ nausea/vomiting
 - ↑ respiratory depression

Hypothesis

- 50 mcg will be noninferior to higher doses

Methods

- Prospective, double-blinded RCT, non-inferiority
- n = 72
- ASA 2
- Scheduled cesarean
- Spinal or CSE
- ITM: 50 mcg, 150 mcg, or 250 mcg
- Primary outcome: time to first opioid
- Enhanced Recovery After Cesarean (ERAC)
 - Consistent with SOAP recommendations
 - Scheduled acetaminophen and NSAID

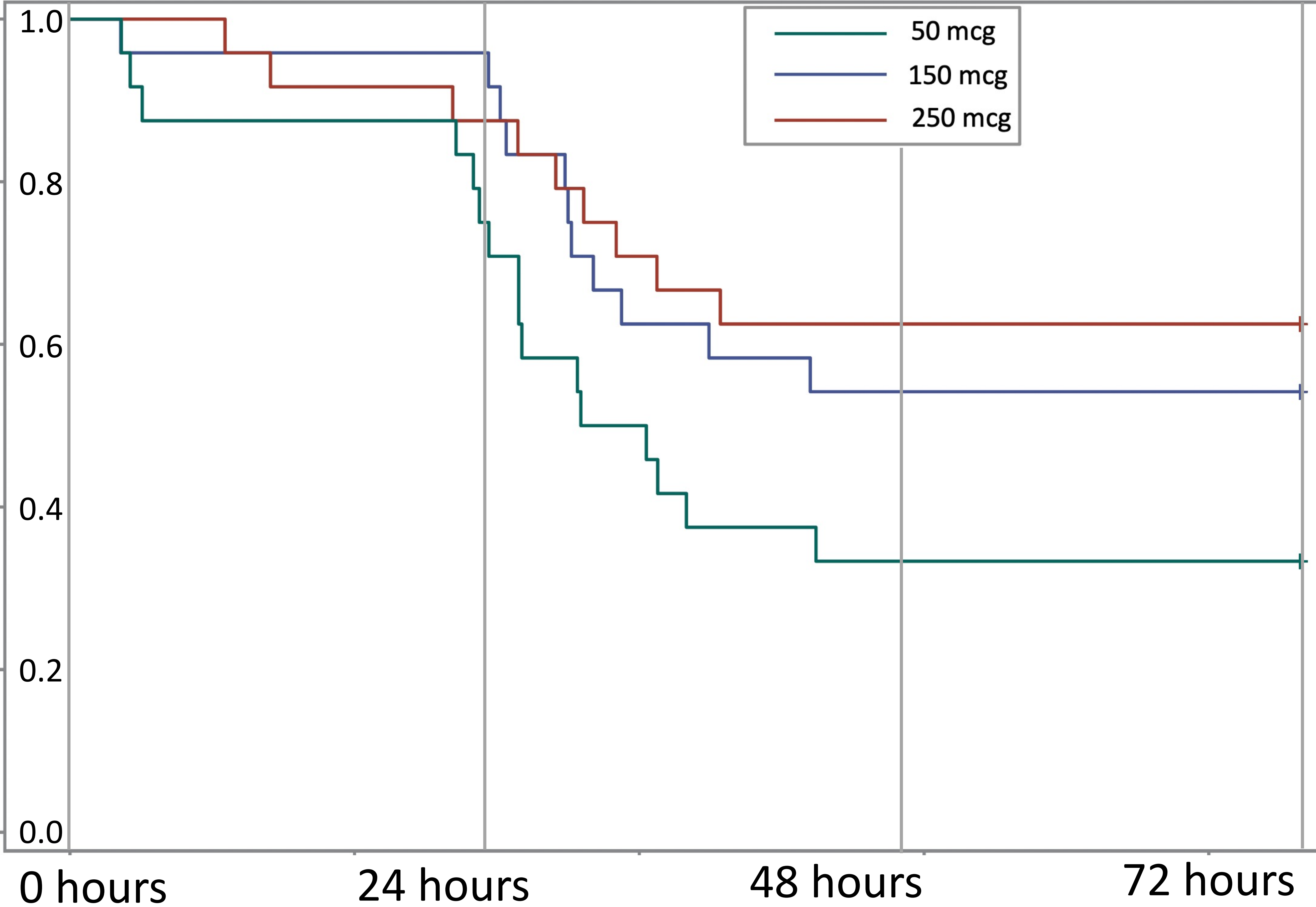
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Primary outcome: Mean time to first analgesic request			
Dose (mcg)	Duration (h)	95% CI	*Statistically significant difference vs 250 mcg
50	*24.5	3.5-34.4	
150	*29.4	24.5-72	
250	32.0	30.5-72	

Opioid-free Survival

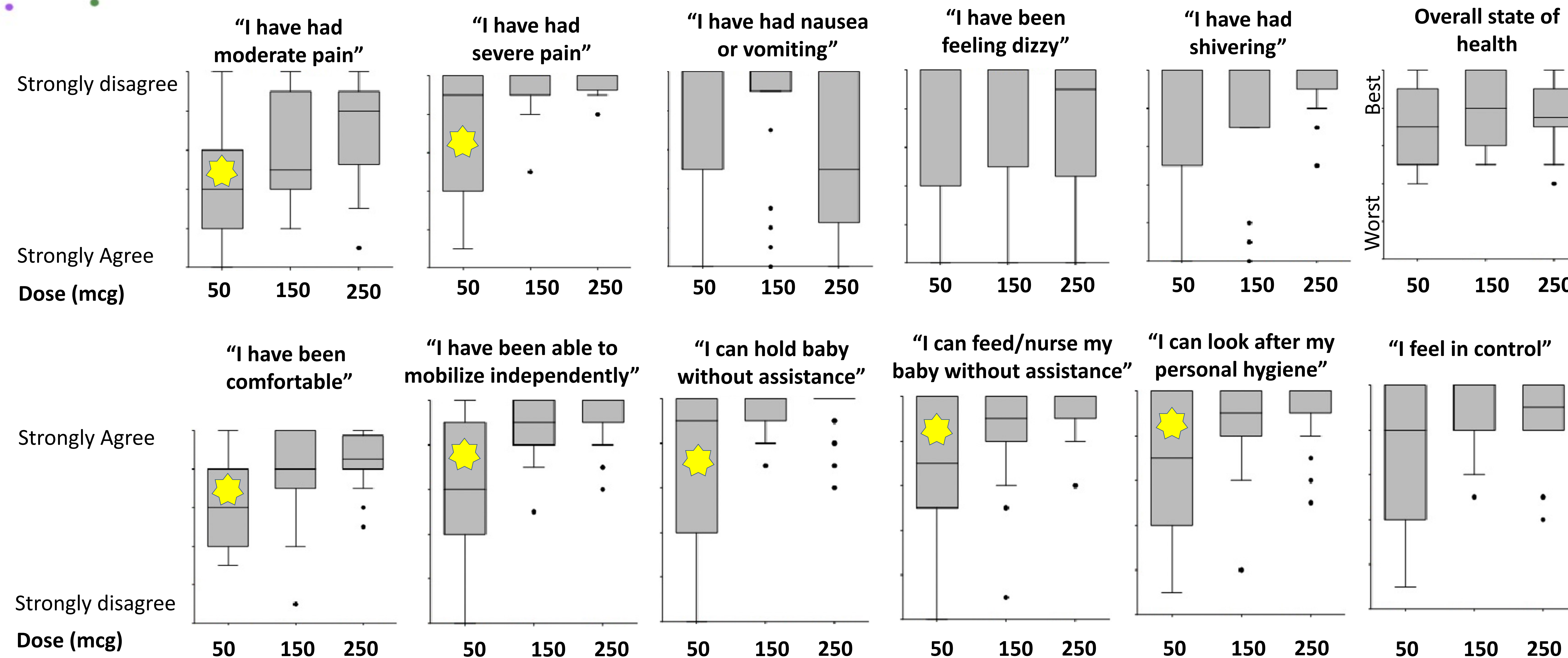


Results

- 86% opioid-free at 24 hours
- 51% opioid-free at 72 hours
- Opioid use: 50 mcg > 250 mcg at 24 hours
- Opioid use: 150 mcg ≈ 250 mcg
- No difference in PONV

Selected Secondary Outcomes				
Dose (mcg)	50	150	250	P-value
Opioid-free at 72h	30.4%	52.2%	62.5%	0.02[†]
VAS pain 0 hours	0	0	0	0.87
VAS pain 2 hours	0.9*	0	0	0.02
VAS pain 24 hours	2.2*	1.8	1.9	0.04
Median # pain med doses	2	0	0**	0.02
Received any antiemetic	4%	9%	13%	0.59
Received any anti-pruritic	9%	4%	4%	0.77
Received rescue regional block	1	0	0	-
*Significant against 150 and 250 **Significant against 50 [†] Significant trend				

Obstetric Quality of Recovery



★ = Statistically significant vs 250 mcg dose

Conclusions

- Analgesic duration
50 < 150 < 250
- 50 mcg
 - Higher pain scores
 - More rescue opioids
- Secondary outcomes
150 ≈ 250
- Similar side effects