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### Ketamine Infusions For Post-Cesarean Pain In Patients with Opioid Use Disorder

Talitha Budi

*Maine Medical Center*

Johanna Cobb

*Maine Medical Center*

Wendy Craig

*Maine Medical Center, [wendy.craig@mainehealth.org](mailto:wendy.craig@mainehealth.org)*

Heather Turcotte

*Maine Medical Center*

Janelle Richard

*Maine Medical Center*

*See next page for additional authors*

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## Authors

Talitha Budi, Johanna Cobb, Wendy Craig, Heather Turcotte, Janelle Richard, and Aurora Quaye

# Ketamine Infusions For Post-Cesarean Pain In Patients with Opioid Use Disorder

Talitha Budi MD, Johanna Cobb MD, Wendy Craig PhD, Heather Turcotte DO, Janelle Richard BA, CCRP, Aurora Quaye MD

## Introduction

- OUD contributes to poor health outcomes for mothers and neonates
- Low-dose ketamine infusion is acceptable for post-surgical pain control in the general population
- New protocol allowed mothers with OUD to receive ketamine infusions after cesarean section

## Methods

1. Retrospective study of parturients on medicated assisted treatment for OUD who underwent cesarean section
2. Compared experience of parturients who did and did not receive ketamine infusions

## Results

- Similar postoperative pain scores
- Median opioid consumption on POD 0 was 71.2 MME in the ketamine group and 90 MME in the non-ketamine group
- Length of stay and breastfeeding frequency were comparable
- No adverse neonatal outcomes

## Discussion

- Opioid consumption may be reduced during ketamine infusion without significant side effects
- Further investigation planned with a prospective, randomized, double-blind, placebo-controlled trial.

Low-dose ketamine infusions after cesarean section may safely decrease pain scores and opioid use.



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**Table 1: Demographic and clinical characteristics stratified by use of postoperative ketamine**

Variable <sup>1</sup>	Use of postoperative ketamine for pain control	
	Yes	No
N	18	8
Age (years)	31.8±3.9	31.4±5.0
BMI (kg/m <sup>2</sup> )	30.0±4.9	36.1±5.1
Smoking status		
Never	3 (16.7)	0 (0.0)
Current	8 (44.4)	7 (87.5)
Former	7 (38.9)	0 (0.0)
Comorbidities		
Anxiety	14 (77.8)	4 (50.0)
Depression	14 (77.8)	4 (50.0)
Opioid agonist at admission		
Buprenorphine	11 (61.1)	5 (62.5)
Dose (mg)	16 [12-24]	16 [9-20]
Methadone	7 (38.9)	3 (37.5)
Dose (mg)	125 [69-175]	75 [50-]
C-section history		
Primary	8 (44.4)	1 (12.5)
Repeat	10 (55.6)	7 (87.5)
Gestational age (weeks)	37.1 [36.1-39.2]	36.7 [32.3-39.1]

<sup>1</sup> Data shown as frequency, n (%); mean ± standard deviation; or, median [interquartile range]

**Table 2: Post operative pain management, pain scores, maternal and neonatal outcomes**

variable	Use of Postoperative ketamine for pain control			
	Yes		No	
N	18		8	
Ketamine infusion				
Start time (h post-op)	.69 (0-19.9)			
Duration (h)	23.9 (10.3-45.3)			
End time (h post-op)	27.4 (10.3-45.3)			
Ketorolac (mg)	n (%)	Mean (full range)	n (%)	Mean (full range)
POD-0	15 (18.3)	90 (30-120)	5 (62.5)	90 (90-90)
POD-1	3 (16.7)	30 (30-60)	0	-
Ibuprofen (mg)				
POD-0	2 (11.1)	600 (600-600)	3 (37.5)	600 (600-600)
POD-1	14 (77.8)	2100 (1200-2400)	8 (100)	1800 (600-1800)
Acetaminophen (mg)				
POD-0	16 (88.9)	2950 (975-4000)	8 (100)	2925 (1300-3900)
POD-1	16 (88.9)	3412 (975-3945)	8 (100)	2925 (1950-3900)
Opioids (MME)				
POD-0	16 (88.9)	71.2 (15.0-463)	7 (87.5)	90 (37.5-200)
POD-1	17 (94.4)	90 (20-334)	7 (87.5)	90 (15-185)
Avg pain score				
POD-0	18	5.3 [4.8-6.2]	8	6.2 [4.1-7.5]
POD-1	18	4.6 [3.6-6.3]	8	5.6 [3.0-6.7]
LOS post surgery (h)	18	70.8 +/- 11.6		71.6 +/- 8.9
Breastfeeding	14 (77.7)		5 (62.5)	
Adverse maternal outcome				
nausea/vomiting	1 (5.6)		0 (0.0)	
other <sup>2</sup>	2 (11.1)		0 (0.0)	
Adverse neonatal outcome	0 (0.0)		0 (0.0)	

<sup>1</sup> diplopia (n=1), insomnia (n=1)  
<sup>2</sup> n=17