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

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

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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 ¹	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 ²)	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]

¹ 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	1 (5.6)		0 (0.0)	
other ²	2 (11.1)		0 (0.0)	
Adverse neonatal outcome	0 (0.0)		0 (0.0)	

¹ diplopia (n=1), insomnia (n=1)
² n=17

