

Risk Factors for Severe Pain Scores in Women with Opioid Use Disorder

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Introduction

- The prevalence of opioid use disorder (OUD) has escalated in recent years
- Women with OUD pose several challenges to adequate postpartum pain control
- Stigma, potential for withdrawal, opioid tolerance and opioid induced hyperalgesia often complicate their pain management

Objective

To evaluate factors that contribute to severe pain scores (SPS) after delivery in women with OUD

Methods

- Single-center retrospective cohort study of women with a history of OUD who presented for prenatal care or delivery between January 2017 to March 2021
- Primary outcome: number of times SPS (score ≥ 7 on a 10-point scale) was reported from delivery to discharge
- Statistical analysis included Chi square, Fisher's Exact and student t tests with significance levels of $p < 0.05$

Results

- 360 women with mean SPS across postpartum days (PPD) resulting:
 - PPD#0: 3.34 (± 2.64)
 - PPD#1: 1.96 (± 3.22)
 - PPD#2: 4.87 (± 4.81)
 - PPD#3 5.27 (± 4.15)
- Cesarean delivery (CD) was independently associated with number of SPS reported ($p < 0.001$, Table 1)
- 76 women (23.5%) utilized elective Patient-Controlled Epidural Analgesia (PCEA) after CD, which was significantly associated with elevated SPS values across immediate postpartum days (Days 0-2) following CD. (Table 2).
- Maternal factors associated with SPS during admission: active drug use ($p=0.023$), body mass index (BMI) ($p=0.008$), gestational diabetes ($p=0.002$), admission for detox ($p=0.037$), preterm delivery (0.037), psychiatric diagnosis ($p=0.036$), and breastfeeding ($p=0.011$)

Prophylactic postpartum PCEA use was associated with severe pain scores postpartum compared to oral analgesics, notably in the immediate postpartum period (Days 0-2).



Tables

Table 1: Severe Postpartum Pain Score Count and Mode of Delivery

	Vaginal Delivery (n=178)	Primary Cesarean (n=95)	Repeat Cesarean (n=75)	p-value
Postpartum Day #0	2.79 (± 1.99)	4.14 (± 3.15)	3.81 (± 3.12)	<0.001
Postpartum Day #1	0.39 (± 0.93)	3.87 (± 4.23)	3.75 (± 3.49)	<0.001
Postpartum Day #2	2.96 (± 3.35)	6.98 (± 5.18)	7.01 (± 5.48)	<0.001
Postpartum Day #3	6.67 (± 5.71)	4.98 (± 3.4)	4.7 (± 3.41)	0.021

*mean \pm -SD

Table 2: Severe Postpartum Pain Score and PCEA Usage

	PCEA Use (n=76)	No PCEA Use (n=247)	p-value
Postpartum Day #0	4.25 (± 3.03)	3.39 (± 2.53)	0.031
Postpartum Day #1	3.47 (± 3.72)	1.52 (± 2.94)	<0.001
Postpartum Day #2	7.47 (± 5.22)	4.57 (± 4.56)	<0.001
Postpartum Day #3	5.30 (± 3.38)	6.62 (± 4.40)	0.025

*mean \pm -SD

Discussion

- Women with OUD warrant a multimodal approach to postpartum pain control
- Further investigation into optimizing effective and safe pain control for women with OUD is needed
- Further investigation is also warranted regarding the role of PCEA analgesia in the immediate postpartum period.

References

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