The Impact of Peripartum Ketamine Exposure on Postpartum Depression:

A Protective Strategy or Potential Risk Factor

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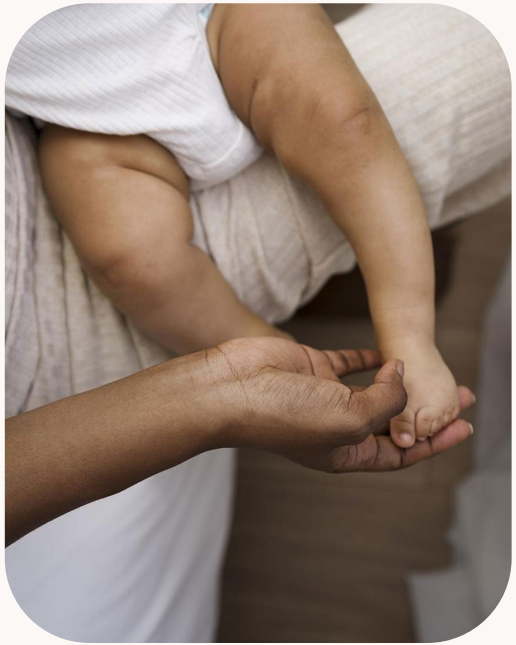
Disclosures

I have no disclosures to report.

Postpartum Depression (PPD)

- Affects 1 in 7 women
- Negatively impacts maternal health and infant development
- Diagnosis via the Edinburgh Postnatal Depression Scale
- Remains pervasive due to treatment inconsistencies



Exploration of Novel Therapies

Ketamine

- NMDA Receptor Antagonist
- Boasts antidepressant and analgesic properties
- Potential agent for PPD prophylaxis

Objective

To evaluate the potential of ketamine administration during the peripartum period as a preventive treatment for PPD

Methodology

Study design

- Retrospective cohort study
- 2 cohorts of 6,741 matched pregnant women who underwent C sections
    - Exposed and Control

Data analysis

Analyzed the incidence of PPD development via:

- Risk difference
- Odds and risk ratios
- Hazard ratio and survival probability

Data collection

Utilized deidentified electronic medical records from the TriNetX database

Risk Analyses

Cohort	Patients in cohort	Patients with outcome	Risk
Exposed	6,741	537	0.080
Control	6,741	178	0.026

	Outcome	95% CI	p-value
Risk Difference	0.053	(0.046, 0.061)	<0.001
Risk Ratio	3.017	(2.555, 3.562)	
Odds Ratio	3.191	(2.684, 3.794	

- All three risk analyses demonst rated ketamine exposure increased PPD risk
- 5.3% risk difference between the exposed and control cohorts
- Both the risk and odds ratios substantiated an increased incidence of PPD

Kaplan-Meier Survival Analysis

Cohort	Patients in cohort	Patients with outcome	Survival Probability
Exposed	6,741	537	90.78%
Control	6,741	178	96.60%

	Hazard Ratio	95% CI
Hazard Ratio	2.874	(2.426, 3.405)

- Survival probability underscored a connection between peripartum ketamine exposure and PPD development
- Hazard ratio reported a three - fold risk increase in the exposed cohort

Discussion

Finding Interpretations

Peripartum ketamine use during C sections is associated with significantly higher incidence of PPD as evidenced by the results.

Connection to Current Literature

This study contradicts the previously suggested protective effects of peripartum ketamine, and highlights the long term effects of keta mine and dose dependency.

Limitations

Explanations for these divergent findings may include the physiological state of pregnancy, the lipophilic profile of ketamine, dose dependency, and the ambiguity surrounding long term outcomes of ketamine usage

Study Implications

Based on these results, ketamine should be avoided in patients with high risk factors for developing PPD.

Conclusions

- Confluence of this study and existing literature imply that ketamine may be a highly effective intervention against PPD when limited to the acute setting

- Exploration of synergistic therapies that enhance long term efficacy may aid in optimizing treatment outcomes

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Thanks

Do you have any questions?