INPLASY PROTOCOL

Corresponding author:
Kai Chen

ck19870129@163.com

Author Affiliation:
Jinan City People's Hospital

Support: None.

Review Stage at time of this submission: Completed but not published.

Conflicts of interest: None declared.

Effects of the enhanced recovery after surgery on postpartumdepression: A protocol for systematic review and meta-analysis

Yang, CC[1]; Chen, K[2]; Li, H[3]; Meng, XH[4].

Review question / Objective: Postpartum depression (PPD) is a serious public health problem that has a negative impact on the mother's health and child development. Futhermore, Postpartum depression (PPD) is the most common mental disorders during the postpartum period with heightened prevalence worldwide, especially among patients receiving Cesarean section (CS). Some studies showed that implementing Enhanced recovery after surgery(ERAS) in CS appears to be beneficial for PPD. However, the effectiveness of ERAS for PPD remains controversial, and no comprehensive study has been conducted to qualitatively and quantitatively assess the efficacy of ERAS protocols for PPD. Therefore, a meta-analysis was designed to collect available evidence to systematically assess the clinical efficacy of ERAS for PPD in CS populations.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 19 November 2022 and was last updated on 19 November 2022 (registration number INPLASY2022110091).

INTRODUCTION

Review question / Objective: Postpartum depression (PPD) is a serious public health problem that has a negative impact on the mother's health and child development. Futhermore, Postpartum depression (PPD) is the most common mental disorders during the postpartum period with heightened prevalence worldwide, especially among patients receiving Cesarean section (CS). Some studies showed that implementing Enhanced recovery after surgery(ERAS) in CS appears to be beneficial for PPD. However, the effectiveness of ERAS for PPD remains controversial, and no comprehensive study has been conducted to qualitatively and quantitatively assess the efficacy of ERAS protocols for PPD. Therefore, a meta-

analysis was designed to collect available evidence to systematically assess the clinical efficacy of ERAS for PPD in CS populations.

Rationale: This protocol is designed according to the guideline of Preferred Reporting Items for Systematic Review and Meta-Analysis.

Condition being studied: ERAS may be a potential and useful preventive intervention for PPD in patients undergoing CS. However, the present evidence assessing the effectiveness of ERAS for PPD in patients undergoing CS remains weak, and no meta-analysis specifically address the impact of ERAS on PPD among women undergoing CS. In this context, we will perform a systematic review and meta-analysis to qualitatively and quantitatively assess the clinical efficacy of ERAS protocols for PPD. Importantly, a comprehensive review of the research in this area will provide clinicians and researchers with important information regarding the novel intervention for PPD. Furthermore, the overall effect estimated from the existing literature will be helpful to guide the clinical practice of PPD.

METHODS

Search strategy: A comprehensive search of the following databases (PubMed, Embase, Cochrane Library, Web of Science, China. National Knowledge Infrastructure, China Science, and Technology Journal Database and Chinese Biomedical Literature Database) will be searched from their inception to October, 2022.

Participant or population: Postpartum women underwent elective or emergency CS and met the diagnostic criteria of PPD through a validated depression score scale.

Intervention: ERAS protocols.

Comparator: perioperative conventional care protocol.

Study designs to be included: RCTs and observational studies.

Eligibility criteria: The exclusion criteria were the following: 1) The literature data are incomplete or impossible to extrapolate;2) Duplicated publications;3) Editorials, letters, reviews, comments ,case reports, etc.

Information sources: A comprehensive search of the following databases (PubMed, Embase, Cochrane Library, Web of Science, China. National Knowledge Infrastructure, China Science, and Technology Journal Database and Chinese Biomedical Literature Database) will be searched from their inception to October, 2022. In addition, we will also search the potential studies in reference lists of eligible studies, and the ongoing eligible trials in international trial registry websites. References to the included literature were checked to identify additional eligible studies.

Main outcome(s): The primary outcome was the incidence of PPD and severity of PPD symptoms.

Additional outcome(s): Other maternal outcomes.

Data management: Statistical analyses were calculated by RevMan 5.3 software. The dichotomous data was performed as risk ratio (RR), and continuous variables were expressed as weighted mean differences (WMD) or standard mean differences (SMD). All results were performed with 95% confidence intervals (CIs). Initial analyses were assessed using the fixed-effects model. Heterogeneity was tested using $I2$ and $I2>50\%$ indicates significant heterogeneity.

Quality assessment / Risk of bias analysis: The quality of evidence will be evaluated using the Grading of Recommendations Assessment, Development and Evaluation (GRADE)/Two independent reviewers will assess the risk of bias of included RCTs according to the Cochrane Handbook.

Strategy of data synthesis: The dichotomous data was performed as risk ratio (RR), and continuous variables were

expressed as weighted mean differences (WMD) or standard mean differences (SMD). All results were performed with 95% confidence intervals (CIs). Initial analyses were assessed using the fixed-effects model. Heterogeneity was tested using I2 and I2>50% indicates significant heterogeneity.

Subgroup analysis: Subgroup analysis will be performed to explore the potential heterogeneity and inconsistency based on different characteristics of participants.

Sensitivity analysis: Sensitivity analysis will be conducted by eliminating one study each time or excluding studies with low quality.

Language restriction: English OR Chinese.

Country(ies) involved: China.

Keywords: Postpartum depression, Enhanced recovery after surgery, Cesarean section, meta-analysis.

Contributions of each author:
Author 1 - Chenchen Yang.
Author 2 - kai Chen.
Author 3 - Hui Li.
Author 4 - Xianhua Meng.