

INPLASY PROTOCOL

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None declared.

Risk Factors of Early-Onset Neonatal Sepsis A Systematic Review and Meta-analysis

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Review question / Objective: To evaluate the possibility of reducing early-onset neonatal sepsis occurrence by identifying its risk factors, intervening to prevent the variable risk factors, and closely monitoring the immutable risk factors.

Condition being studied: Results of most previous studies that evaluated the risk factors of EOS are limited as most of these studies were single-center studies that performed partial screening for risk factors.

Eligibility criteria: The selection of articles for this study was based on the following criteria: 1) EOS diagnosed based on clear laboratory and/or clinical standards; 2) the use of multivariate regression analysis to determine risk factors; and 3) the presence of complete literature data, including OR and 95% CI of risk factors. We excluded case reports, comments, abstracts, letters, and agreements.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 15 June 2021 and was last updated on 15 June 2021 (registration number INPLASY202160049).

INTRODUCTION

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performed partial screening for risk factors.

METHODS

Participant or population: Neonatus.

Intervention: No.

Comparator: No.

Study designs to be included: case-control, cohort studies, and cross-sectional studies.

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Information sources: The contents of the data extraction table included: 1) basic information (the first author of each study, year of publication, country or region of publication, and EOS-associated risk factors), 2) Study data (the study sample size, number of neonates with EOS, ORs of risk factors obtained using multivariate logistic regression analysis, and the upper and lower limits of 95% CIs). If necessary, the authors (D.W. and G.P.) obtained supplementary data by contacting the authors of the published studies.

Main outcome(s): Risk factors related to the occurrence of early-onset neonatal sepsis, the pooled OR, and the 95% CI upper and lower limits were obtained to represent the correlation strength between risk factors and early-onset neonatal sepsis occurrence; the pooled I² value was used to determine the heterogeneity of the combined results.

Quality assessment / Risk of bias analysis: Articles were selected by two independent reviewers to reduce publication bias and

heterogeneity; the Newcastle-Ottawa Scale score was used to evaluate the quality of case-control and cohort studies, whereas the Agency for Healthcare Research and Quality scale score was used to evaluate the quality of cross-sectional studies.

Strategy of data synthesis: Data abstraction was performed in accordance with PRISMA guidelines. The Newcastle-Ottawa Scale and Agency for Healthcare Research and Quality scale scores were used to evaluate the quality of the included studies, and the fixed-effects model was used to combine the results.

Subgroup analysis: No.

Sensitivity analysis: Research results that had a significant influence on the change in I² value before and after removal were considered as the source of heterogeneity and re-analyzed after removal.

Country(ies) involved: China.

Keywords: neonatal sepsis, risk factors.

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