INPLASY PROTOCOL

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Review Stage at time of this submission: Preliminary searches.

Conflicts of interest:
None declared.

Risk factors of sepsis associated acute kidney injury in patients with sepsis: a meta-analysis

Liu, HR[1].

Review question / Objective: This meta-analysis aims to analyze the risk factors for the occurrence of acute kidney injury in patients with sepsis

Condition being studied: Sepsis is a common life-threatening clinical syndrome in the intensive care units, affecting 20-30 million people worldwide each year. Severe sepsis can directly lead to multi-organ dysfunction and is the leading cause of death in ICU patients. Acute kidney injury (AKI) is a common and serious complication of sepsis.

Eligibility criteria: Inclusion criteria： A. Meeting the diagnostic criteria for sepsis or septic shock(sepsis 1.0, sepsis 2.0, sepsis 3.0). B. Meeting the diagnostic criteria for AKI (KDIGO, AKIN, RIFLE). C. Original data provides OR value and 95%CI or data can be converted to OR value and 95%CI.Exclusion criteria： A. Pre-existing renal insufficiency or other renal disease. B. AKI not due to sepsis. C. No risk factors in the outcome index. D. NOS quality score<6. E. Repeated and reviewed literature.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 19 September 2022 and was last updated on 19 September 2022 (registration number INPLASY202290091).

INTRODUCTION

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death in ICU patients. Acute kidney injury (AKI) is a common and serious complication of sepsis.

METHODS

Participant or population: Sepsis associated acute kidney injury.

Intervention: The main outcome of this study is risk factor, there was no group of intervention.

Comparator: Unapplicable.

Study designs to be included: Case-control study, retrospective cohort study, prospective cohort studies, and RCT.

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Information sources: PubMed, Web of Science and CNKI databases.

Main outcome(s): OR and 95%CI of risk factors.

Quality assessment / Risk of bias analysis: All included studies were examined by the NOS quality assessment scale, which is available at http://www.ohri.ca/programs/clinical_epidemiology/oxford.asp. NOS score ≥ 6 was considered high-quality articles and were included in the study, and exclude the low-quality articles.

Strategy of data synthesis: the OR values and 95%CI of risk factors were imported into Stata SE 16.0 software. Heterogeneity test was performed on the study data first. If I2≥50%, inter-group data were considered to be heterogeneous, the combined amount was calculated using random effect model. If I2<50%, the fixed-effect model is adopted.Pooled OR and 95%CI were finally obtained. P ≤0.05 were considered to be statistically significant.

Subgroup analysis: Subgroup analysis based on data heterogeneity.

Sensitivity analysis: Sensitivity analyses were performed by changing the analysis model and re-combining the statistics after excluding each study in turn.

Country(ies) involved: China.

Keywords: SAKI, Sepsis, Acute kidney injury, Risk factors, Meta-analysis.

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