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Meta-analysis of the incidence and risk factors of acquired weakness in intensive care unit patients with sepsis

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ADMINISTRATIVE INFORMATION

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

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 20 November 2024 and was last updated on 20 November 2024.

INTRODUCTION

Review question / Objective The aim of this study was to determine the incidence and risk factors of intensive care unit-acquired weakness (ICU-AW) in sepsis patients through a meta-analysis.

Condition being studied The purpose of this study was to determine the incidence and risk factors of ICU-AW in sepsis patients through meta-analysis, and to provide evidence-based evidence for early clinical identification and targeted prevention of ICU-AW in sepsis patients.

METHODS

Participant or population The subjects were sepsis patients with ICU-AW.

Intervention Observational study.

Comparator Risk factors and incidence of sepsis.

Study designs to be included Including case control and cohort studies.

Eligibility criteria The subjects were sepsis patients with ICU-AW. Inclusion age ≥ 18 years; There is a clear diagnostic basis for ICU-AW.

Information sources Electronic databases. Methods A computer search was conducted in PubMed, Web of Science, Embase, Cochrane Library, Scopus, China National Knowledge Infrastructure (CNKI), Wanfang Database, and VIP Database from database inception to August 2024, and a meta-analysis was conducted using RevMan 5.1.

Main outcome(s) Diabetes mellitus, length of ICU stay, APACHEII score, mechanical ventilation time, lactic acid, serum albumin, vasoactive drugs, glucocorticoids, sedatives and analgesics

(OR=1.70), and malnutrition were the risk factors for ICUS-AW in sepsis patients ($P < 0.05$).

Quality assessment / Risk of bias analysis The Newcastle-le-Ottawa-Scale was used to evaluate literature quality.

Strategy of data synthesis In this study, meta-analysis of risk factors was performed using RevMan5.1 software. Continuous variables were represented by weighted mean difference (WMD) and 95% confidence interval (95%CI). The bicategorical variables were expressed by odds ratio (OR) and 95% and 95%CI. If $P > 0.1$ and $I^2 < 50\%$, the inter-study heterogeneity was acceptable, and the fixed-effect model was used for analysis. If $P \leq 0.1$, or $I^2 \geq 50\%$, the heterogeneity was large, and the random effects model was used for analysis. Only descriptive analysis was performed for studies that could not combine effect sizes. $P < 0.05$ was considered to be statistically significant.

Subgroup analysis No subgroup analysis was involved in this study.

Sensitivity analysis Sensitivity analysis was used for large inter-group heterogeneity.

Country(ies) involved China.

Keywords Sepsis; ICU-AW; Risk factors; Meta-analysis; Evidence-based nursing.

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