INPLASY PROTOCOL

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None declared.

Post-stroke epilepsy and risk of all-cause mortality: a meta-analysis of cohort studies

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Review question / Objective: **We aimed to evaluate the association between post-stroke epilepsy (PSE) PSE and all-cause mortality via a meta-analysis.**
Condition being studied: **PSE is now defined as unprovoked seizures occurring more than one week or more than two weeks after stroke, according to the latest International League Against Epilepsy (ILAE) clinical definition of epilepsy.**
Main outcome(s): **Outcomes: odds ratio for the incidence of all-cause deaths comparing between stroke patients with and without PSE.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 08 June 2022 and was last updated on 08 June 2022 (registration number INPLASY202260031).

INTRODUCTION

Review question / Objective: **We aimed to evaluate the association between post-stroke epilepsy (PSE) PSE and all-cause mortality via a meta-analysis.**

Rationale: **Prevalance of PSE is high, while it remains under determined if it is necessary to routinely prevent these events. Previous estudies have linked PSE with mortality, while the results were not always consistent. Accordingly, a meta-analysis is needed.**

Condition being studied: **PSE is now defined as unprovoked seizures occurring more than one week or more than two weeks after stroke, according to the latest International League Against Epilepsy (ILAE) clinical definition of epilepsy.**

METHODS

Search strategy: A combined key words: (1) "post-stroke" OR "after stroke" OR "poststroke"; (2) "epilepsy" OR "epileptic" OR "seizure" OR "seizures"; and (3) "survival" OR "death" OR "deaths" OR "mortality" OR "prognosis" OR "outcome" OR "outcomes".

Participant or population: Adult patients with stroke. Patients with histories of epilepsy before the onset of the stroke were excluded.

Intervention: Patients with PSE during follow-up. The diagnosis of PSE was in accordance with the criteria used in the included studies, which were generally defined according to the recommendation of the ILAE as patient with at least one unprovoked seizure occurred more than 7 days or 14 days after the onset of the last symptomatic stroke.

Comparator: Patients without PSE during follow-up.

Study designs to be included: Cohort studies published in peer-reviewed journals.

Eligibility criteria: Outcomes: odds ratio for the incidence of all-cause deaths comparing between stroke patients with and without PSE.

Information sources: Medline, Web of Science, and Embase.

Main outcome(s): Outcomes: odds ratio for the incidence of all-cause deaths comparing between stroke patients with and without PSE.

Data management: Two independent authors conducted database search, data collection, and assessment of study quality separately. In case of disagreement, it was resolved by discussion with the corresponding author to reach a consensus.

Quality assessment / Risk of bias analysis: The Newcastle–Ottawa Scale (NOS) was used for assessing the quality of the studies. This scale ranges from 1 to 9 stars and judges each study on three broad categories: selection of the study groups; the comparability of the groups; and the ascertainment of the outcome of interest.

Strategy of data synthesis: The association between PSE and the risk of all-cause mortality of patients with stroke was presented as odds ratio (OR) and its 95% confidence interval [CI]. A random-effect model was applied to pool the results after incorporating of possible between-study heterogeneity.

Subgroup analysis: Subgroup analyses were performed to evaluate the possible influences of study characteristics on the outcome, such as the stroke type (ischemic or hemorrhagic), study design (prospective or retrospective), definition of PSE, mean follow-up durations, and quality scores. Medians of continuous variables were used to define subgroups.

Sensitivity analysis: Sensitivity analyses by excluding one cohort at a time were performed to evaluate the stability of the results.

Language: None.

Country(ies) involved: China.

Keywords: post-stroke epilepsy; all-cause mortality; ischemic stroke; intracerebral hemorrhage; meta-analysis.

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