

INPLASY PROTOCOL

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Review Stage at time of this submission: Formal screening of search results against eligibility criteria.

Conflicts of interest:

None declared.

INTRODUCTION

Review question / Objective: This meta-analysis aims to present a collective view on the relationship between related factors and stroke in the type 2 diabetes population.

Factors related to the risk of stroke in the population with type 2 diabetes: A protocol for systematic review and meta-analysis

Wang, K¹; Xu, P²; Lv, Z³; Cui, Y⁴; Zang, X⁵; Zhang, D⁶; Wang, J⁷.

Review question / Objective: This meta-analysis aims to present a collective view on the relationship between related factors and stroke in the type 2 diabetes population.

Eligibility criteria: (1)Prospective cohort study, nested case-control study; (2)Have clear diagnostic criteria; (3)Exclude reviews, comments, case reports, animal experiments; (4)OR and 95% confidence interval (or calculated result data) of stroke-related factors in the type 2 diabetes population must be reported; (5) Or the OR and 95% confidence interval of stroke per change unit related factors must be given. After omitting duplicate studies and/or studies in the same cohort, the most complete and recent study were finally included.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 15 October 2021 and was last updated on 15 October 2021 (registration number INPLASY2021100046).

Condition being studied: Relationship factors and stroke in the type 2 diabetes population.

METHODS

Participant or population: patients diagnosed with type 2 diabetes people.

Intervention: Type 2 diabetes with stroke.

Comparator: Type 2 diabetes without stroke.

Study designs to be included: Case-control study and cohort study.

Eligibility criteria: (1)Prospective cohort study, nested case-control study; (2)Have clear diagnostic criteria; (3)Exclude reviews, comments, case reports, animal experiments; (4)OR and 95% confidence interval (or calculated result data) of stroke-related factors in the type 2 diabetes population must be reported; (5) Or the OR and 95% confidence interval of stroke per change unit related factors must be given. After omitting duplicate studies and/or studies in the same cohort, the most complete and recent study were finally included.

Information sources: Pubmed, Web of science, Cochrane library, Medline and China National Knowledge Infrastructure databases.

Main outcome(s): The incidence of stroke in patients with type 2 diabetes.

Quality assessment / Risk of bias analysis: Newcastle-Ottawa Scale.

Strategy of data synthesis: STATA16.0 software was used and researchers used standard data extraction tables to collect the following information: article metadata, including the name of the first author publication year, country or region, sample size, number of stroke cases, and related factors reported. We extracted the OR and 95% CI of stroke in the type 2 diabetes population for follow-up analysis. Choose the most appropriately adjusted model to evaluate the risk value of the final analysis when extracting the data. If the study does not report a risk estimate, an unadjusted estimate will be calculated based on the number of cases and controls in the defined category of related factors.

Subgroup analysis: When the heterogeneity was large, we performed subgroup analysis. According to the characteristics of the included articles, we performed subgroup analysis, such as the differences in diagnostic criteria.

Sensitivity analysis: If $I^2 \geq 50\%$ for the primary outcome, sensitive analysis was conducted by removing one article with an outlying effect size.

Country(ies) involved: China.

Keywords: stroke; diabetes; risk factors; meta-analysis.

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