

INPLASY PROTOCOL

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Corresponding author:
Qiang ZHANG

zhangqiangq7@126.com

Author Affiliation:
Institute of Basic Research in
Clinical Medicine, China
Academy of Chinese Medical
Sciences.

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**Review Stage at time of this
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None declared.

INTRODUCTION

Review question / Objective: Many meta-analyses of GB preparations for these diseases have published, however, yet no studies systematically have evaluated and reported on its methodological and

Quality of Conduct and Reporting of Meta-analyses Assessing the Efficacy and Safety of Ginkgo biloba preparation: Protocol for A Methodological Study

Zhang, Q¹; Lu, CC²; Qiao, M³; Lei, C⁴; Xie, YM⁵; Wang, ZF⁶.

Review question / Objective: Many meta-analyses of GB preparations for these diseases have published, however, yet no studies systematically have evaluated and reported on its methodological and reporting quality. Therefore, we designed a methodological study to fill this knowledge gap.

Condition being studied: Many GB preparations have been widely used in clinical treatment of many diseases such as angina pectoris, ischemic stroke, and dementia. Many meta-analyses of GB preparations for these diseases have published, however, yet no studies systematically have evaluated and reported on its methodological and reporting quality.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 23 June 2022 and was last updated on 23 June 2022 (registration number INPLASY202260092).

reporting quality. Therefore, we designed a methodological study to fill this knowledge gap.

Rationale: We will evaluate the methodological and reporting quality using AMSTAR-2 and PRISMA2020, respectively.

The correlation between methodological and reporting quality will be assessed using Spearman correlation coefficient. Five potential factors that affecting the methodological quality will be assessed using univariate and multivariate analysis. The fragility index of each binary outcome will be calculated to assess the robustness of pooled results. Stata 16.0 and Excel 2016 will be used to conduct statistical analysis.

Condition being studied: Many GB preparations have been widely used in clinical treatment of many diseases such as angina pectoris, ischemic stroke, and dementia. Many meta-analyses of GB preparations for these diseases have been published, however, yet no studies systematically have evaluated and reported on its methodological and reporting quality.

METHODS

Participant or population: The patients included in the literature of this study were patients who had used ginkgo preparations, regardless of the disease. The patients in this study were patients who had used ginkgo preparations, regardless of the disease.

Intervention: The experimental group was treated with Ginkgo biloba preparation alone or combined with other traditional Chinese medicine or conventional western medicine.

Comparator: Control group: any control group, such as conventional western medicine, traditional Chinese medicine or placebo.

Study designs to be included: We will use AMSTAR-2 and PRISMA 2020 to evaluate the methodological and reporting quality of included meta-analyses.

Eligibility criteria: We will include the articles meeting the following criteria: (1) type of study: meta-analyses of GB preparations, and published in English or Chinese in peer-reviewed journals; the definition of a meta-analysis applied in this study is same as in our previous article, (2)

subjects: humans with any disease (e.g., angina pectoris, ischemic stroke, and dementia), and were treated by GB preparations, (3) interventions: the control group was treated with placebo or conventional therapy, whereas the interventional group was treated with GB preparations (e.g., ginkgolide injection, ginkgo leaf dropping pills) alone or in combination with same treatments in the control group; (4) outcome: any outcome involving efficacy and safety will be considered. We will exclude: (1) duplicate publications or cannot access to full text, (2) protocols, narrative or qualitative systematic reviews, letters, conference abstracts, network meta-analyses, individual participant data meta-analyses.

Information sources: PubMed, Embase, CNKI, WanFang, and Chinese biomedical literature database.

Main outcome(s): We will evaluate the methodological and reporting quality using AMSTAR-2 and PRISMA2020, respectively. The correlation between methodological and reporting quality will be assessed using Spearman correlation coefficient. Five potential factors that affecting the methodological quality will be assessed using univariate and multivariate analysis. The fragility index of each binary outcome will be calculated to assess the robustness of pooled results.

Quality assessment / Risk of bias analysis: The bias risk assessment tool developed by Cochrane Collaboration Network was used to evaluate the research quality. The evaluation items include: generation of random sequence; Whether to hide allocation; Whether the subjects and researchers are blinded; Whether the outcome evaluators are blinded; Whether the outcome data is complete; Whether there is selective report; Other bias.

Strategy of data synthesis: AMSTAR-2 includes 16 items, and items 2, 4, 7, 9, 11, 13 and 15 are the critical items. For a meta-analysis, AMSTAR-2 provides three answers to the question of the items, including "Yes", "Partial Yes", and "No".

According to the methodological weakness exits in each meta-analysis, the overall methodological quality of each of them can be evaluated as high, moderate, low, or critically low. PRISMA 2020 is an updated version on the basis of PRISMA 2009 as the reporting guidelines for the systematic review and meta-analysis. It consists of 7 sections with a total of 42 items. The original intention of PRISMA was developed to improve the reporting of the systematic review and meta-analysis, but it has been widely employed to evaluate the reporting quality of published systematic reviews or meta-analyses. In this study, we will use “Yes” and “No” to assess whether the included meta-analyses meet the reporting requirement of each item. For facilitating the statistical analysis, we will assign 1, 0.5, and 0 points to “Yes”, “Partial Yes”, and “No” used in AMSTAR-2 and PRISMA 2020 (without “Partial Yes”).

Email: ktzu2018@163.com

Author 6 - Zhifei WANG - The author 6 read, provided feedback and approved the final manuscript.

Email: wzhftcm@163.com

Subgroup analysis: Not applicable.

Sensitivity analysis: The fragility index of each binary outcome will be computed to assess the robustness of pooled results.

Language: No other language restrictions.

Country(ies) involved: Beijing, China.

Keywords: Gingko, Meta-analyses, quality, AMSTAR-2, PRISMA 2020, Fragility index.

Contributions of each author:

Author 1 - Qiang ZHANG - Author 1 drafted the manuscript.

Author 2 - Cuncun LU - Author 2 revised the manuscript and provided statistical expertise.

Email: cuncunlu2017@163.com

Author 3 - Meng QIAO - The author 3 contributed to the development of the selection criteria, and the risk of bias assessment strategy.

Email: qiaomeng0802@outlook.com

Author 4 - Chao LEI - The author 4 read manuscript and provided feedback.

Email: chaolei2021@163.com

Author 5 - Yanming XIE - The author 5 read, provided feedback and approved the final manuscript.