

INPLASY PROTOCOL

To cite: Shi et al. The Efficacy and Safety of Tripterygium Glycosides for Diabetic Kidney Disease: An Overview of Systematic Reviews and Meta-Analyses. Inplasy protocol 202230065. doi: 10.37766/inplasy2022.3.0065

Received: 14 March 2022

Published: 15 March 2022

Corresponding author:
Tiantian Yang

ytt@bucm.edu.cn

Author Affiliation:
Provincial Hospital Affiliated to Shandong First Medical University.

Support: Tiantian Yang.

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

Conflicts of interest:
None declared.

The Efficacy and Safety of Tripterygium Glycosides for Diabetic Kidney Disease: An Overview of Systematic Reviews and Meta-Analyses

Shi, H¹; Deng, P²; Wang, L³; Liu, W⁴; Li, Y⁵; Dong, C⁶; Wang, Y⁷; Si, G⁸; Yang, T⁹.

Review question / Objective: Tripterygium glycosides (TG) is widely used in China to treat Diabetic kidney disease (DKD), and a large number of researchers have completed several systematic reviews/meta-analyses (SRs/MAs) in this research area. However, the methodological and evidentiary quality of these SRs/MAs remains to be evaluated, and whether these findings provide reliable evidence for clinicians remains controversial.

Information sources: Pubmed, Cochrane Library, Embase, Wanfang Database, VIP, China National Knowledge Infrastructure (CNKI), and Chinese Biological Medicine (CBM).

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 15 March 2022 and was last updated on 15 March 2022 (registration number INPLASY202230065).

INTRODUCTION

Review question / Objective: Tripterygium glycosides (TG) is widely used in China to treat Diabetic kidney disease (DKD), and a large number of researchers have completed several systematic reviews/meta-analyses (SRs/MAs) in this research area. However, the methodological and

evidentiary quality of these SRs/MAs remains to be evaluated, and whether these findings provide reliable evidence for clinicians remains controversial.

Condition being studied: Tripterygium glycosides (TG) is widely used in China to treat Diabetic kidney disease (DKD), and a large number of researchers have

completed several systematic reviews/meta-analyses (SRs/MAs) in this research area. However, the methodological and evidentiary quality of these SRs/MAs remains to be evaluated, and whether these findings provide reliable evidence for clinicians remains controversial.

METHODS

Participant or population: The included population includes patients diagnosed with DKD based on international or national standards, regardless of race, age, gender, time of onset, and source of cases.

Intervention: To ensure that the results are more convincing, there are two types of interventions we can include: (1) the control group adopts conventional treatment (CT) or placebo, and the intervention group adds TG on the basis of the control group. (2) The control group was in the therapy of CT, and the intervention group was treated with TG. The CT included diet, exercise, hypoglycemia, blood pressure, lipid regulation, anticoagulation, diuresis, etc. also includes other positive drugs including drugs such as RAAS inhibitors and Huangkui capsules.

Comparator: To ensure that the results are more convincing, there are two types of interventions we can include: (1) the control group adopts conventional treatment (CT) or placebo, and the intervention group adds TG on the basis of the control group. (2) The control group was in the therapy of CT, and the intervention group was treated with TG. The CT included diet, exercise, hypoglycemia, blood pressure, lipid regulation, anticoagulation, diuresis, etc. also includes other positive drugs including drugs such as RAAS inhibitors and Huangkui capsules.

Study designs to be included: SRs/MAs are based on randomized controlled trials (RCTs) in the treatment of DKD with TG, and the language of any study is limited to English and Chinese.

Eligibility criteria: Repeated publications, other overviews, Mesh meta-analysis,

narrative reviews, and conference abstracts were excluded.

Information sources: Pubmed, Cochrane Library, Embase, Wanfang Database, VIP, China National Knowledge Infrastructure (CNKI), and Chinese Biological Medicine (CBM).

Main outcome(s): Total clinical effective rate, 24 h-urine total protein (24-UTP), serum creatinine (SCr), Serum albumin (Alb).

Quality assessment / Risk of bias analysis: Two independent researchers evaluated the methodological quality, report quality, risk of bias, and evidence quality of each SRs/MAs respectively. The tools used are as follows: Methodological Quality of Systematic Reviews 2 (AMSTAR-2)(15), risk of deviation in systematic reviews (ROBIS) (16), preferred reporting project for systematic reviews and meta-analysis (PRISMA)(17), and the classification, evaluation, development, and evaluation of recommendations (GRADE). If there is a disagreement in the process, it will be resolved through discussion or consensus with the third-party reviewer. AMSTAR2 is an SRs/MAs evaluation tool that contains 16 items to evaluate the methodological quality of each included SRs/MAs. To assess the effectiveness of SRs/MAs will be directly affected by seven key items (2, 4, 7, 9, 11, 13, and 15). According to the completion of each item, it can be divided into "No", "Partial Yes" or "Yes". At the same time, the overall confidence of SRs/MAs results can be divided into four levels: "high", "moderate", "low", and "very low". The ROBIS tool is used to assess the risk of bias of each SRs/MAs. The tool is completed in 3 stages: 1) relevance assessment; 2) assessing some of the issues that may be involved in SRs; 3) Evaluating the overall risk of deviation in domain 2 of the interpretation stage. The result was judged as "low", "unclear" or "high". Use the PRISMA checklist to assess the quality of each SRs/MAs report. It has the following areas: (a) title, (b) summary, (c) introduction, (d) method, (e) result, (f) discussion, (g) funding. And it consists of

27 projects. According to the completeness of the project information report, each project is considered "yes" (full report), "partial yes" (partial report), or "no" (no report). The GRADE system classifies the quality of evidence into four levels: "high", "moderate", "low", or "very low", and is used to assess the quality of evidence for each outcome measure registered in these SRs/MAs. If there are research limitations, inconsistencies, inaccuracy, indirectness, or publication bias, the initial score will be reduced(18).

Strategy of data synthesis: NA.

Subgroup analysis: NA.

Sensitivity analysis: NA.

Country(ies) involved: China.

Keywords: Tripterygium glycosides; Diabetic kidney disease; Systematic review; Meta-analyses; Overview.

Contributions of each author:

Author 1 - Hongshuo Shi.

Author 2 - Pin Deng.

Author 3 - Lei Wang.

Author 4 - Wenbin Liu.

Author 5 - Yinghao Li.

Author 6 - Chengda Dong.

Author 7 - Yanfang Wang.

Author 8 - Guomin Si.

Author 9 - Tiantian Yang.