INPLASY PROTOCOL

To cite: Li et al. Efficacy of comparisons of different Chinese herbal granules(CHGs) for the treatment for essential hypertension: A protocol for systematic review and meta-analysis. Inplasy protocol 202230095. doi: 10.37766/inplasy2022.3.0095

Received: 20 March 2022

Published: 20 March 2022

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Support: **Natural Science Foundation of.**

Review Stage at time of this submission: **The review has not yet started.**

Conflicts of interest:
None declared.

Efficacy of comparisons of different Chinese herbal granules(CHGs) for the treatment for essential hypertension: A protocol for systematic review and meta-analysis

Li, T[1]; Yu, M[2]; Sun, F[3]; Shi, L[4]; Dong, F[5]; Ji, X[6].

Review question / Objective: **The objective of this systematic review was to assess the efficacy and safety of Chinese herbal granules(CHGs) in the treatment of essential hypertension.**
Condition being studied: **Essential hypertension is a risk factor for early cardiovascular disease and is a major preventable risk factor for premature death and disability worldwide. Despite the remarkable effect of western antihypertensive drugs, there are still some patients with unsatisfactory blood pressure control. A systematic review based on 24 studies shows that patients with refractory hypertension account for 14% to 16% of the total population with hypertension.In addition, with the widespread application of western antihypertensive drugs, disadvantages such as adverse reactions and limited mechanism of action are gradually exposed, leading to poor adherence in patients. Therefore, it is of great clinical significance to explore complementary therapies for improving the prevention and control effect of essential hypertension. Traditional Chinese medicine (TCM) can lower blood pressure stably, prevent and cure target organ damage, improve symptoms, and improve patients' quality of life. As a result, TCM is widely used in the clinical practice of hypertension in China. The combination of Chinese and western drugs can complement each other, lower blood pressure synergistically, improve efficacy and reduce adverse reactions.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 20 March 2022 and was last updated on 20 March 2022 (registration number INPLASY202230095).

INTRODUCTION

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preventable risk factor for premature death and disability worldwide. Despite the remarkable effect of western antihypertensive drugs, there are still some patients with unsatisfactory blood pressure control. A systematic review based on 24 studies shows that patients with refractory hypertension account for 14% to 16% of the total population with hypertension.In addition, with the widespread application of western antihypertensive drugs, disadvantages such as adverse reactions and limited mechanism of action are gradually exposed, leading to poor adherence in patients. Therefore, it is of great clinical significance to explore complementary therapies for improving the prevention and control effect of essential hypertension. Traditional Chinese medicine (TCM) can lower blood pressure stably, prevent and cure target organ damage, improve symptoms, and improve patients' quality of life. As a result, TCM is widely used in the clinical practice of hypertension in China. The combination of Chinese and western drugs can complement each other, lower blood pressure synergistically, improve efficacy and reduce adverse reactions.

METHODS

Participant or population: Participants with essential hypertension will be included without limitation of age, gender and race.

Intervention: The intervention group was given a type of CHGs on the basis of conventional antihypertensive drugs.

Comparator: The control group was given conventional antihypertensive drugs.

Study designs to be included: According to the retrieval strategies, randomized controlled trials (RCTs) on CHI therapies for ACI will be obtained from China National Knowledge Infrastructure, WanFang, Chinese Scientific Journals Database, PubMed, Embase and Cochrane Library, regardless of publication date or language. Studies were screened based on inclusion and exclusion criteria, and the Cochrane risk bias assessment tool will be used to evaluate the quality of the literature. The network meta-analysis will be performed in Markov Chain Monte Carlo method and carried out with Stata 14 and WinBUGS 1.4.3 software. Ultimate.

Eligibility criteria: The PICOS principles were given full consideration to establish the inclusion and exclusion criteria of this systematic review.

Information sources: Studies will be obtained from the China National Knowledge Infrastructure, Wan Fang Data, Chinese Scientific Journals Database, PubMed, Embase and Cochrane Library, regardless of publication date or language.

Main outcome(s): This study will compare the efficacy and safety of CHGs in the treatment of essential hypertension and give a more reasonable choice.

Quality assessment / Risk of bias analysis: Two researchers will be designated to assess the quality of the included RCTs independently by utilizing the Cochrane Risk of Bias assessment tool. As specified by Cochrane Handbook V.5.1.0, the following sources of bias will be considered: random sequence generation, allocation concealment, participant blinding, outcome assessor blinding, incomplete outcome data, selective reporting, and other sources of bias. Each domain will be rated as having a high, low, or unclear risk of bias as appropriate. The 2 reviewers will resolve any disagreements through discussion, and a third reviewer may be involved if no consensus is reached.

Strategy of data synthesis: The network meta-analysis will be performed in Markov Chain Monte Carlo method and carried out with Stata 14 and WinBUGS 1.4.3 software. Ultimately, the evidentiary grade for the results will be evaluated.

Subgroup analysis: If there is high heterogeneity in the included studies, we will perform subgroup analyses to explore the differences in age, sex, race, lesion

location, and course of the disease/ treatment.

Sensitivity analysis: To ensure robustness of the combined results, sensitivity analyses will be performed to assess the impact of studies with a high risk of bias. We will compare the results to determine whether lower-quality studies should be excluded.

Country(ies) involved: China.

Keywords: essential hypertension; Chinese herbal granules; meta-analysis.

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