INPLASY PROTOCOL

To cite: Liu et al. The efficacy of Banxia Baizhu Tianma Decoction combined with Xuefu Zhuyu Decoction for essential hypertension and the effects on endothelial function: A systematic review and meta-analysis. Inplasy protocol 202080013. doi: 10.37766/inplasy2020.8.0013

Received: 04 August 2020

Published: 04 August 2020

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Support: **BMNSF(No.7182120)**

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

Conflicts of interest:
None.

The efficacy of Banxia Baizhu Tianma Decoction combined with Xuefu Zhuyu Decoction for essential hypertension and the effects on endothelial function: A systematic review and meta-analysis

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Review question / Objective: **This study will provide evidence for the efficacy of Ban xia bai zhu tian ma Decoction combined with Xue fu zhu yu Decoction in the treatment of essential hypertension and the effects on endothelial function.**
Condition being studied: **Hypertension is a complex syndrome affected by a variety of genetic and environmental factors, affecting the health of more than 1.2 billion people, and is the primary risk factor for death from cardiovascular and cerebrovascular diseases.Endothelial dysfunction plays an important role in the occurrence and development of hypertension. It already exists in the pre-hypertension stage, which can cause changes in the function of microvessels and participate in the link of target organ damage.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 04 August 2020 and was last updated on 04 August 2020 (registration number INPLASY202080013).

INTRODUCTION

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METHODS

Participant or population: We will include adult patients (18 years of age and older) with essential hypertension. There is no limit to sex, disease severity, race. Essential hypertension should be confirmed according to the standard diagnostic criteria including "2018 Chinese guidelines for the management of hypertension ".

Intervention: Angelica sinensis (Oliv.) Diels (root, Apiaceae), Rehmannia glutinosa (Gaertn.) DC. (root, Plantaginaceae), Prunus persica (L.) Batsch (seed, Rosaceae), Carthamus tinctorius L. (flower, Compositae),Citrus aurantium L. (fruit, Rutaceae), Paeonia veitchii Lynch (root, Paeoniaceae), Bupleurum chinense DC. (root, Apiaceae), Glycyrrhiza uralensis Fisch. (root, Leguminosae), Platycodon grandiflorum (Jacq.) A. DC. (root, Campanulaceae), Ligusticum striatum DC. (root, Apiaceae) and Achyranthes bidentata Blume. (root, Amaranthaceae), etc.

Comparator: The control group was treated with conventional western medicine.

Study designs to be included: Literature search, literature screening, data collecton, software analysis, discussion and conclusion.

Eligibility criteria: The randomized controlled trial of Banxia Baizhu Tianma Decoction combined with Xuefu Zhuyu Decoction in the treatment of essential hypertension which is limited to Chinese and English.

Information sources: We will search the database (Pubmed, Embase, Cochrane Library, CNKI, Wan fang Data, and VIP Information)for the systematic review or meta-analysis.There is no limitation to languages and time.

Main outcome(s): Clinical total effective rate; Systolic blood pressure (SBP); diastolic blood pressure(DBP);nitric oxide(NO); endothelin-1 (ET-1), etc.

Quality assessment / Risk of bias analysis: There will be two independent reviewers to assess the quality of included systematic reviews; discrepancies will be resolved through discussion or third party adjudication. The quality of the reviews will be evaluated by Cochrane Collaboration Network and GRADE tool.

Strategy of data synthesis: RevMan 5.3 software will be used for statistical analysis. Dichotomous will be expressed by Odds ratio (OR), mean difference (MD) will be used for continuous variable data with a 95% confidence interval(CI). $P<0.05$ will be considered to indicated a statistically significant result.

Subgroup analysis: None planned for this study.

Sensibility analysis: None planned for this study.

Country(ies) involved: China.

Keywords: Banxia Baizhu Tianma Decoction; Xuefu Zhuyu Decoction; Essential hypertension; endothelial function; Meta-analysis.

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