

INPLASY PROTOCOL

To cite: Wang et al.
Acupuncture combined with
western medicine for the
treatment of hypertension : A
protocol for an updated
systematic review and meta-
analysis. Inplasy protocol
202150047. doi:
10.37766/inplasy2021.5.0047

Received: 12 May 2021

Published: 13 May 2021

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

Conflicts of interest:
None declared.

Acupuncture combined with western medicine for the treatment of hypertension : A protocol for an updated systematic review and meta-analysis

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Review question / Objective: This systematic review and meta-analysis aims to evaluate the effectiveness and safety of acupuncture combined with western medicine in the treatment of hypertension.

Condition being studied: Hypertension is a kind of cardiovascular syndrome with the main clinical manifestation of continuous increase of systemic arterial blood pressure. Acupuncture is an important part of Traditional Chinese Medicine (TCM) intervention. This study aims to provide latest and updated proof of systematic review to assess the effectiveness and safety of acupuncture for hypertension.

Information sources: PubMed, EMBASE (include MEDLINE), Cochrane Central Register of Controlled Trial, ovid, Web of Science, China National Knowledge Infrastructure, WangFang Database, Chinese Science and Technology Periodical Database, SinoMed.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 13 May 2021 and was last updated on 13 May 2021 (registration number INPLASY202150047).

INTRODUCTION

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acupuncture combined with western medicine in the treatment of hypertension.

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increase of systemic arterial blood pressure. Acupuncture is an important part of Traditional Chinese Medicine (TCM) intervention. This study aims to provide latest and updated proof of systematic review to assess the effectiveness and safety of acupuncture for hypertension.

METHODS

Participant or population: The participants should be diagnosed with primary hypertension by using clearly defined or internationally recognized criteria.

Intervention: Acupuncture or electroacupuncture combined with western medicine should be treated in treatment group.

Comparator: Western medicine should be treated in control group.

Study designs to be included: Randomized controlled trial (RCT).

Eligibility criteria: This systematic review will only include RCT of acupuncture combined with western medicine in the treatment of hypertension regardless of blind.

Information sources: PubMed, EMBASE (include MEDLINE), Cochrane Central Register of Controlled Trial, ovid, Web of Science, China National Knowledge Infrastructure, WangFang Database, Chinese Science and Technology Periodical Database, SinoMed.

Main outcome(s): The main outcome measures included clinical efficacy, syndrome efficacy, TCM syndrome score, changes of diastolic and systolic blood pressure, changes of blood pressure variability, heart rate variability, pulse rate variability and adverse reactions.

Quality assessment / Risk of bias analysis: Cochrane risk of bias assessment tool version 2.0 (RoB 2.0) will be used to assess the risk of bias of RCTs. In addition, we will use the modified Jadad scale to evaluate the quality of the included studies.

Strategy of data synthesis: The Revman 5.3 software will be used for perform meta-analysis. When the p-value of Q-test > 0.1 and I² < 50%, heterogeneity is acceptable and a fixed effects model will be applied. If p-value of Q-test < 0.1 and I² > 50%, heterogeneity is significant and we will use subgroup analysis, meta regression analysis and sensitivity analysis to explore the causes, if still unable to find, we will use random effect model to estimate or descriptive analysis. Binary variables will be expressed using the risk ratio (RR) with 95% confidence interval (CI) and continuous variables by the weighted mean difference (WMD) with 95% CI.

Subgroup analysis: No.

Sensitivity analysis: We will use the method of eliminating low-quality research according to the risk of bias assessment results and replacement effect model to conduct sensitivity analysis to judge the robustness of the conclusion.

Country(ies) involved: China.

Keywords: acupuncture; hypertension; electroacupuncture; meta-analysis; systematic review.

Contributions of each author:

Author 1 - Sihan Wang.

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Author 4 - Ji Cui.