INPLASY PROTOCOL

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

Conflicts of interest:
The authors declare no conflicts of interest.

Effectiveness and safety of Plum-blossom needle in the treatment of Myopia：A protocol for systematic review and meta-analysis

Zhu, S[1]; Xiong, J[2].

Review question / Objective: **This study comprehensively searched the literature to further systematically evaluate the efficacy and safety of plum-blossom needle in the treatment of myopia, with a view to clinically treating myopia, alleviating its related clinical symptoms and preventing its further development, and providing the latest evidence-based medical evidence.**
Condition being studied: **Myopia is a common visual disorder which has become a public health problem worldwide. Myopia and high myopia are substantial risk factors for severe visual impairment and other serious eye diseases. Plum-blossom needle used to prevent and control myopia is a common practice in China.This study aims to evaluate the efficacy and safety of acupuncture in delaying the progression of myopia through systematic evaluation.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 08 August 2020 and was last updated on 08 August 2020 (registration number INPLASY202080026).

INTRODUCTION

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METHODS

Participant or population: All cases included in the trial were patients with myopia and met the clinical diagnostic criteria.

Intervention: The treatment group was mainly Plum-blossom needle therapy.

Comparator: The comparison group consisted of those receiving routine care or any intervention other than Plum-blossom needle therapy.

Study designs to be included: A randomized controlled trial (RCT) study on Plum-blossom needle therapy treatment of myopia, published in any language.

Eligibility criteria: Types of study:All randomized controlled trials (RCT s) study on Plum-blossom needle therapy treatment of myopia.Others such as case reports, animal experiments, non-RCTs, or RCT protocol will be excluded.

Information sources: 8 electronic databases including PubMed, Web of Science, the Cochrane Database, EMBASE, China Knowledge Network (CNKI), Wanfang Data Knowledge Service Platform, VIP Chinese Science and Technology Periodical Database (VIP) and China Biomedical Literature (CBM) Database.

Main outcome(s): The naked eye eyesight.

Additional outcome(s): 1- Diopter 2- Ciliary body thickness

Quality assessment / Risk of bias analysis: Two reviewers performed rigorous methodological quality evaluation of the included studies with reference to the Cochrane Collaboration Bias Risk Assessment Tool for the extracted methodological features.

Strategy of data synthesis: Meta analysis was performed using RevMan5.4 provided by the Cochrane collaboration network. Relative risk (RR) was used for the two categorical variables, and mean difference (MD) was used for the continuous variables. Both were expressed with 95% confidence intervals (CI). The heterogeneity test between the results of the included studies was performed using the I^2 test. The I^2 value reflects the proportion of the total variation in the effect size due to the existence of heterogeneity. (I^2 > 50%, indicating that heterogeneity is more obvious . If there is no obvious heterogeneity between the research results (I^2 50%), the source of the heterogeneity is analyzed first, which may lead to heterogeneity Factors for subgroup analysis. If statistical heterogeneity exists in each subgroup without clinical heterogeneity, a random effects model is used for analysis. If the heterogeneity is too large and the results cannot be combined, a descriptive analysis is used and a sensitivity analysis is performed if necessary.

Subgroup analysis: Subgroup analysis will be handled according to the differences in acupuncture methods, patient conditions, and control.

Sensibility analysis: Sensitivity analyses will be performed to verify the robustness of the review conclusions. The impacts of study design, methodological quality, and missing data will be evaluated. Sensitivity analyses were planned by studies considered being at low risk of bias.

Country(ies) involved: China.

Keywords: Plum-blossom needle; myopia ; meta-analysis; systematic review.

Contributions of each author:
Author 1 - Siyuan Zhu.
Author 2 - Jun Xiong.