INPLASY PROTOCOL

Corresponding author:
Zhang Ziyang

378676388@qq.com

Author Affiliation:
Changchun University of traditional Chinese Medicine.

Support: No.

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

Conflicts of interest:
None declared.

Acupuncture Therapy for Post-stroke Depression: A Protocol for Systematic Review and Network Meta-analysis

Zhang, Z[1]; Miao, S[2]; Wang, H[3].

Review question / Objective: The purpose of mesh meta-analysis of this randomized controlled trial is to evaluate the efficacy and safety of different acupuncture methods in the treatment of PSD and find the best treatment. As an important part of non drug therapy, acupuncture therapy is frequently promoted in the treatment of Post-stroke depression（PSD）all over the world.We will collect the literature on randomized controlled trial (RCT) of acupuncture methods for PSD.The main results are Hamilton Depression Scale (HAMD) and Beck Depression Inventory (BDI).

Information sources: We will search seven databases from its establishment to August 30, 2021, including Cochrane, PubMed, EMBASE, web of science, Wanfang database, VIP database and China National Knowledge Infrastructure (CNKI).

INTRODUCTION

Review question / Objective: The purpose of mesh meta-analysis of this randomized controlled trial is to evaluate the efficacy and safety of different acupuncture methods in the treatment of PSD and find the best treatment. As an important part of non drug therapy, acupuncture therapy is frequently promoted in the treatment of Post-stroke depression（PSD）all over the world.We will collect the literature on randomized controlled trial (RCT) of acupuncture methods for PSD.The main

results are Hamilton Depression Scale (HAMD) and Beck Depression Inventory (BDI).

Condition being studied: Post stroke depression is a neuropsychological disorder after stroke and one of the common complications of stroke.Without active treatment, it will lead to serious cognitive impairment, but it is easy to be ignored because some patients have language disorders.Epidemiological survey estimates that about 30% of stroke patients have PSD symptoms in the acute stage, and patients with PSD have poor rehabilitation progress, longer hospital stay and higher mortality.Due to various psychological changes after stroke, PSD patients will have changes in sleep, appetite, mental state, etc, decreased attention and decision-making ability, loss of self-confidence, low self-esteem or guilt, and even despair or repeated suicidal thoughts, which greatly affects the quality of daily life, not only individuals, but also society, such as the performance of work or daily activities, Thus increasing medical costs.Early antidepressant therapy seems to promote physical and cognitive recovery after stroke and may improve 10-year survival after stroke.Compared with the side effects of PSD, the effect of drug treatment is limited.Therefore, more PSD patients and doctors seek effective, safe and non-toxic alternative therapy.

METHODS

Participant or population: Patients with ischemic stroke or hemorrhagic stroke and diagnosed as depression according to the diagnostic and Statistical Manual of mental disorders or the international classification of diseases and related health problems of the World Health Organization (WHO).

Intervention: Studies using acupuncture as the main intervention will be included. We define acupuncture methods as acupuncture stimulation of acupoints, including traditional acupuncture (TA), electroacupuncture (EA), ear acupuncture (AA), warm acupuncture (WNA), fire acupuncture (FA), and moxibustion. Therefore, acupoint catgut embedding, acupoint injection, bloodletting therapy and herbal medicine should be excluded because they use related drugs.

Comparator: The control group was treated with routine treatment（sham acupuncture, blank group, conventional drugs） or acupuncture alone.

Study designs to be included: Our study included all completed RCT studies without any language or regional restrictions. If the study was designed as a randomized crossover trial, the phase I results were included. In recent years, mesh meta-analysis has provided accurate and effective strategies for evaluating alternative interventions in two or more of the same situations. By combining the results of indirect and direct evidence, mesh meta-analysis can estimate the intervention effect in the absence of positive comparison, and further obtain the efficacy ranking of various methods.

Eligibility criteria: The age of patients diagnosed with PSD was ≥ 18, and there was no restriction on race, gender or initial severity of the disease. The included patients had informed consent to the research process and actively and completely participated in the whole research process. Patients with a history of depression before being diagnosed with stroke were excluded.

Information sources: We will search seven databases from its establishment to August 30, 2021, including Cochrane, PubMed, EMBASE, web of science, Wanfang database, VIP database and China National Knowledge Infrastructure (CNKI).

Main outcome(s): The main results were Hamilton Depression Scale (HAMD) and Beck Depression Inventory (BDI).

Quality assessment / Risk of bias analysis: Cochrane Risk of Bias Tool has the following 7 areas: random sequence generation, allocation hiding, participant

and personnel blinding, result evaluation blinding, incomplete outcome data, selective reporting and other biases. A bias value of "low", "unclear" or "high" will be used to rank the risk of bias.

Strategy of data synthesis: XWe will use Stata software 16.0 for mesh meta-analysis of PSD patients under Bayesian algorithm.Statistical approaches to network meta-analysis(NMA)are largely classified as frequentist and Bayesian frameworks.Because part of NMA has indirect, multiple comparisons, Bayesian framework seems logically more valid, and 60-70% of NMA studies have taken a Bayesian approach.

Subgroup analysis: With more and more high-quality clinical trials, subgroup analysis is becoming the standard in clinical trial data analysis, and subgroup analysis is favored more and more.We will perform mesh analysis and subgroup analysis to detect the sources of inconsistency and heterogeneity. We will perform subgroup analysis on the following variables: (1) initial severity of disease; (2) Sample size; (3) Average age; (4) Duration, frequency and course of treatment of different acupuncture methods.

Sensitivity analysis: Sensitivity analysis can not only evaluate the stability and reliability of the combined results of meta-analysis, but also evaluate whether the combined results are significantly affected by a single study.We will conduct a sensitivity analysis of the results to assess the robustness of the results and examine whether specific impression factors lead to significant heterogeneity.

Country(ies) involved: China.

Keywords: Stroke; Depression; Acupuncture; Mesh meta analysis.

Contributions of each author:
Author 1 - Zhang Ziyang.
Author 2 - Miao Songbai.
Author 3 - Wang Hongfeng.