INPLASY PROTOCOL

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1)The funders had no role in the design, execution, or writing of the study. 2)The authors report no conflicts of interest.

Different Acupuncture Intervention Time-points for Improving Capacity in Motor Function and Activities of Daily Living after Stroke: A Systematic Review and Network Meta-Analysis

Zhuo,Y[1]; Zhang, H[2].

Review question / Objective: **This study will provide evidence-based references to evaluate the efficacy of different acupuncture intervention time-points during the treatment of stroke. 1.Types of studies. Only randomized controlled trials (RCTs) of acupuncture for stroke will be recruited. Additionally, Studies should be available in full papers as well as peer-reviewed and the original data should be clear and sufficient. 2. Types of participants. All adults with a recent or past medical history of ischemic or hemorrhagic stroke, which is diagnosed with clearly defined or internationally recognized criteria will be eligible for recruitment and regardless of nationality, race, gender, age, educational background. 3. Types of interventions and comparators The control group takes non-acupuncture treatment, including rehabilitation treatment, or combined with symptomatic and supportive treatment. The treatment of the experimental group is on basis of the control group, besides this, acupuncture must be used in the experimental group. Participants in both groups could receive routine medical treatment and regardless of treatment duration, as well as frequency. 4. Types of outcomes The primary outcome is measured with the Fugl-Meyer Assessment score (FMA), which has been widely used to evaluate the limb motor function of patients after stroke.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 10 December 2020 and was last updated on 10 December 2020 (registration number INPLASY2020120060).

INTRODUCTION

Review question / Objective: **Acupuncture therapy has been widely used in the clinical treatment of stroke for a long time. However, the optimal intervention time-point of acupuncture in stroke is controversial. This study will provide evidence-based references to evaluate the efficacy of different acupuncture intervention time-points during the**

treatment of stroke. 1.Types of studies. Only randomized controlled trials (RCTs) of acupuncture for stroke will be recruited. Additionally, Studies should be available in full papers as well as peer-reviewed and the original data should be clear and sufficient. 2. Types of participants. All adults with a recent or past medical history of ischemic or hemorrhagic stroke, which is diagnosed with clearly defined or internationally recognized criteria will be eligible for recruitment and regardless of nationality, race, gender, age, educational background. 3. Types of interventions and comparators The control group takes non-acupuncture treatment, including rehabilitation treatment, or combined with symptomatic and supportive treatment. The treatment of the experimental group is on basis of the control group, besides this, acupuncture must be used in the experimental group. Participants in both groups could receive routine medical treatment and regardless of treatment duration, as well as frequency. 4. Types of outcomes The primary outcome is measured with the Fugl-Meyer Assessment score (FMA), which has been widely used to evaluate the limb motor function of patients after stroke.The secondary outcome includes the Barthel Index(BI), which can assess the activities of daily living accurately. Additionally, safety assessments such as adverse events and drop-out cases may also be taken into consideration.

Rationale: A network meta-analysis under a Bayesian framework.

Condition being studied: Acupuncture & Stroke.

METHODS

Participant or population: Patients with stroke.

Intervention: Acupuncture.

Comparator: Different Acupuncture Intervention Time-points.

Study designs to be included: Only RCTs.

Eligibility criteria: 1.Types of studies. Only randomized controlled trials (RCTs) of acupuncture for stroke will be recruited and regardless of population characteristics, blind method, and duration of trials. However, the language is limited to English or Chinese. We will remove Non-RCTs such as meeting abstracts, clinical experience, case reports, system reviews, animal trails, duplications meeting abstracts. Additionally, Studies should be available in full papers as well as peer-reviewed and the original data should be clear and sufficient. 2. Types of participants. All adults with a recent or past medical history of ischemic or hemorrhagic stroke, which is diagnosed with clearly defined or internationally recognized criteria (e.g. confirmed by CT or MRI scan) will be eligible for recruitment and regardless of nationality, race, gender, age, educational background. However, the patients who are not medically stable or unable to follow basic commands will be excluded. 3. Types of interventions and comparators The control group takes non-acupuncture treatment, including rehabilitation treatment, or combined with symptomatic and supportive treatment. The treatment of the experimental group is on basis of the control group, besides this, acupuncture or one of the following related treatment (acupoint-based therapy): electroacupuncture, auricular acupuncture, head acupuncture, warm acupuncture, hand acupuncture must be used in the experimental group. Participants in both groups could receive routine medical treatment and regardless of treatment duration, as well as frequency. 4. Types of outcomes The primary outcome is measured with the Fugl-Meyer Assessment score (FMA), which has been widely used to evaluate the limb motor function of patients after stroke.The secondary outcome includes the Barthel Index(BI), which can assess the activities of daily living accurately. Additionally, safety assessments such as adverse events and drop-out cases may also be taken into consideration.

Information sources: An all-round online search for published related studies will be

conducted in the following academic databases from their inception throughout October 2020: EMBASE Database, PubMed, the Cochrane Library, China National Knowledge Infrastructure (CNKI), Wan Fang databases, Chinese Scientific Journals Database (VIP) and China Biological Medicine Database (CBM). The MeSH terms together with free words will be adopted as the basic strategy of the search and the language is limited to English or Chinese. Additionally, conference literature and relevant references will also be checked carefully under the guidelines of the snowball strategy.

Main outcome(s): 1.the Fugl-Meyer Assessment (FMA); 2.the Barthel Index (BI).

Additional outcome(s): Safety assessments such as adverse events and drop-out cases

Data management: The network meta-analysis will be performed based on the Bayesian framework and literature selection will be conducted by two trained reviewers. All data analysis will be calculated by Revman5.3, WinBUGS 1.4.3, Stata13.0, and R software 3.6.1. The Assessment of heterogeneity, inconsistency, subgroup, sensitivity, and publication bias will also be done under the guidelines of Cochrane Collaboration's tool.

Quality assessment / Risk of bias analysis: 1) To grade the quality of each evidence, 2 reviewers will conduct the assessment separately according to the GRADE Working Group approach. 2)The bias risk of all the included studies will be assessed by two trained researchers under the guidelines of Cochrane 'Risk of bias ' assessment tool.

Strategy of data synthesis: fixed effect; funnel plot; Forest plot; Bayesian Networks Structure.

Subgroup analysis: When considerable heterogeneity is found, subgroup analysis will be conducted based on the probable sources of heterogeneity (e.g. the duration of treatment, number of stroke episodes, age, or research quality).

Sensibility analysis: Given that various levels of the methodological quality of studies could tend to affect the final result, we will conduct sensitivity analysis by eliminating literature with a high risk of bias.

Language: The language is limited to English or Chinese.

Country(ies) involved: China.

Keywords: stroke, acupuncture, systematic review, network meta-analysis.

Dissemination plans: The results of this study will be submitted to a peer-reviewed journal for publication.

Contributions of each author:
Author 1 - Yue Zhuo - The author drafted the manuscript.
Author 2 - Hong Zhang - The author contributed to study design.