Efficacy and safety of acupuncture for post-stroke central facial palsy: a protocol for a systematic review and meta-analysis

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Review question / Objective: The purpose of this study was to evaluate the efficacy and safety of acupuncture in the treatment of post-stroke central facial palsy and to provide a reliable basis for clinical acupuncture in the treatment of post-stroke central facial palsy. The study included all randomized controlled trials that were consistent with acupuncture for the treatment of central facial paralysis after stroke.

Condition being studied: Study selection, data extraction and quality assessment will be performed by 2 reviewers independently. Two reviewers will independently assess the methodological quality of the included studies in accordance with the Cochrane collaboration's risk of bias tool. And all valid data will be imported into RevMan 5.4 software for analysis and synthesis.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 01 March 2022 and was last updated on 01 March 2022 (registration number INPLASY202230004).

INTRODUCTION

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**METHODS**

**Participant or population:** All patients included in the trial were 18 years of age or older with a clinician's diagnosis of central facial palsy after stroke. Regardless of race, gender, course of disease, economic status or education level, or geographical differences.

**Intervention:** Acupuncture treatment as the main intervention, included electro-acupuncture, warm acupuncture, acupoint catgut embedding, auricular acupuncture, fire acupuncture, and body acupuncture. The type, dose and duration of acupuncture treatment were not defined.

**Comparator:** Control group was treated with conventional western medicine treatment plan.

**Study designs to be included:** RCT.

**Eligibility criteria:** It is consistent with the diagnosis of central facial paralysis after stroke in the main points of Diagnosis of various cerebrovascular diseases revised by the fourth National Academic Conference on Cerebrovascular Diseases of Chinese Medical Association in 1995.

**Information sources:** PubMed, Cochrane Library, Web of science, EMBASE, Medline, China National Knowledge Infrastructure (CNKI), Wanfang, China Biomedical Literature Database (CBM), and VIP Information Chinese Journal Service Platform (VIP).

**Main outcome(s):** The primary outcome is recovery of facial function, as assessed by the House-Brackmann Facial Grading System (HBGS) and a modified version of HBGS.

**Additional outcome(s):** The secondary outcomes are Sunnybrook Facial Nerve Rating System Scale score, Facial Disability Index (FDI) score, recurrence rate, adverse events related to acupuncture (e.g., bleeding, dizziness, severe pain).

**Quality assessment / Risk of bias analysis:** The Cochrane Collaboration's Tool.

**Strategy of data synthesis:** All valid data will be imported into RevMan 5.4 software for analysis and synthesis. Continuous data will be analyzed by the mean difference (MD) or standard mean difference (SMD). Dichotomous data will be assessed using the risk ratio (RR) or odds ratio (OR). Each effect size will be given its 95% confidence interval (CI). The specific method is as follows: if I² ≤ 50%, the homogeneity will be considered acceptable, and the fixed effect model will be used for data synthesis. If I² > 50%, heterogeneity will be considered significant. We will conduct subgroup analysis or sensitivity analysis to investigate the sources of heterogeneity from a clinical or methodological perspective. If there is no obvious clinical or methodological heterogeneity, statistical heterogeneity will be considered and analyzed by random effect model. If the data cannot be synthesized, descriptive analysis will be used to solve this problem.

**Subgroup analysis:** In the case of high heterogeneity, we will conduct subgroup analysis, which will consider subjects (age, sex), type of acupuncture, treatment duration, control group type, disease duration, and sequelae psychological symptoms to determine the source of heterogeneity.

**Sensitivity analysis:** To verify the robustness of the review conclusions, we will gradually exclude high-risk low-quality articles for sensitivity analysis to assess the impact of studies with high risk of bias.

**Country(ies) involved:** China.

**Keywords:** post-stroke central facial palsy, acupuncture, systematic review, protocol.
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