Effectiveness of different acupuncture therapies for sudden deafness: A protocol for systematic review and Bayesian network meta-analysis

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Review question / Objective: Effectiveness of different acupuncture therapies for sudden deafness: A protocol for systematic review and Bayesian network meta-analysis

Condition being studied: Sudden deafness is a sudden, unexplained sensorineural hearing loss. Since the etiology of most patients is unclear, treatment is mainly empirical, such as glucocorticoids and hyperbaric oxygen therapy. In recent years, various scholars published articles on the treatment of sudden deafness by acupuncture and moxibustion constantly updated, indicating that acupuncture and moxibustion therapy has played a great role in the treatment of this disease. Acupuncture are commonly used in the treatment of sudden deafness, including acupuncture, moxibustion, electroacupuncture and so on. This article aims to use a method of network meta-analysis to explore the effectiveness of common acupuncture interventions for sudden deafness and find the most effective acupuncture therapy.
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METHODS

Participant or population: Patients clearly diagnosed with sudden deafness.

Intervention: Different acupuncture therapies was the main intervention.

Comparator: Acupuncture, moxibustion, electroacupuncture or some other means of treatment.

Study designs to be included: Randomised controlled trial will be included.

Eligibility criteria: Patients clearly diagnosed with sudden deafness, age, gender, course of disease and other factors are not limited.

Information sources: We will search the randomized controlled trials (RCT) literatures of different acupuncture therapies for sudden deafness in 8 electronic databases, including 4 English databases [PubMed, EMBASE, the Cochrane Central Register of Controlled Trials (Cochrane Library) and Web of Science] and 4 Chinese databases [Chinese National Knowledge Infrastructure(CNKI), Chinese VIP Information, Wanfang Database, and Chinese Biomedical Literature Database (CBM)], from their inception to October 2022, to identify and retrieve all randomised controlled trials, describing the use of different acupuncture therapies for treatment of sudden deafness. We also contacted the authors, searching for experimental data, clinical research registration, or other related grey literature.

Main outcome(s): Acupuncture, electroacupuncture, moxibustion, acupoint catgut embedding are related to the effective rate, cure rate and so on.

Quality assessment / Risk of bias analysis: Two reviewers will independently assesses the quality of the selected studies according to the Cochrane Collaboration's tool for randomized controlled trials. Items will be evaluated in three categories: Low risk of bias, unclear bias and high risk of bias. The following characteristics will be evaluated: Random sequence generation (selection Bias) Allocation concealment (selection bias) Blinding of participants and personnel ((performance bias) Incomplete outcome data (attrition bias) Selective reporting (reporting bias).

Strategy of data synthesis: Two authors will independently extract data. Any disagreement will be resolved by discussion until consensus is reached or by consulting a third author. The following data will be extracted: author, year of publication, country where the study was conducted, study period, original inclusion criteria, total number of people included in the study, group, interventions, sample size, age (years), gender, course of the disease, course of treatment.

Subgroup analysis: Once individual studies may consist of multiple treatment group, subgroup analysis will be performed to explain heterogeneity if possible. Factors such as following will be considered: Patients characteristics (age, sex), course of the disease, different scales, frequency of therapy, type and dose of opioids.

Sensitivity analysis: In order to ensure the stability of the outcome index results, the
sensitivity analysis of each outcome index was carried out.

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

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**Keywords:** acupuncture, sudden deafness, network meta-analysis.

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