INPLASY PROTOCOL

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Conflicts of interest:
None declared.

Acupuncture therapy for subacute and chronic cough in adults: a systematic review and meta analysis

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Review question / Objective: **The effectiveness of acupuncture in the treatment of subacute and chronic cough.**
Eligibility criteria: **In the literature, the intervention measures of the treatment group were acupuncture or acupuncture combined with other therapies agent, while the control group was placebo or oral non-acupuncture therapy such as western medicine and Chinese medicine; In the same study, when the treatment group was acupuncture combined with other treatment methods, the intervention measures adopted by the control group, except no acupuncture intervention, must be the same as the experimental group .We excluded trials comparing one acupuncture therapy with another, or trials comparing the use of other non- acupuncture related therapy in this review, and trials where acupuncture therapy were not the main intervention were excluded. No limitations were imposed concerning the duration of the application, dosage, or the form of the acupuncture therapy used. We included trials that allowed concurrent use of other medications such as analgesics, antitussives, antipyretics, or mucolytics if they allowed equal access to such medication.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 25 July 2022 and was last updated on 25 July 2022 (registration number INPLASY202270110).

INTRODUCTION

Review question / Objective: **The effectiveness of acupuncture in the treatment of subacute and chronic cough.**

Condition being studied: **Cough is one of the most common medical complaints accounting for as many as 50 million clinical visits per year in China.At present, there are many clinical studies on the effectiveness of acupuncture treatment of**

cough , which provides the original data for our systematic review.

METHODS

Search strategy: Research selection, data extraction and quality assessment will be conducted independently by two reviewers.Two reviewers independently assess the methodological quality of included studies according to the Cochran Collaboration bias risk tool. All valid data will be imported into ReMan 5.4 software for analysis and synthesis.

Participant or population: Only studies conducted in humans were included. We excluded trials that included child with cough, only adult subjects (age 18-).We included trials evaluating people of either sex ,course and underlying disease with a clinical syndrome of cough with or without productive sputum, with a physician's diagnosis of acute ,subacute or chronic cough with persistent cold , flu-like illness, upper airway cough syndrome, gastroesophageal reflux disease, non-asthmatic eosinophilic bronchitis, chronic bronchitis, postinfectious cough, intolerance to angiotensin-converting enzyme inhibitor medication, malignancy, interstitial lung diseases, obstructive sleep apnea, chronic sinusitis, and psychosomatic cough that was not resolving. With clear diagnostic criteria, such as Diagnostic and Curative Effect Criteria of TCM Diseases and Syndromes.

Intervention: Acupuncture treatment.

Comparator: Conventional western medicine treatment Chinese medicine treatment or Chinese herbalmedicine treatment or no treatment and sham acupuncture treatment.

Study designs to be included: All relevant randomized controlled trials (RCTs) in English and Chinese will be included. WhileNonRCTs, quasi-RCTs, cohort studies,reviews, case reports, experimental studies, expert experience, the data of the included study is missing or incomplete, and duplicate publications will be excluded.

Eligibility criteria: In the literature, the intervention measures of the treatment group were acupuncture or acupuncture combined with other therapies agent, while the control group was placebo or oral non-acupuncture therapy such as western medicine and Chinese medicine; In the same study, when the treatment group was acupuncture combined with other treatment methods, the intervention measures adopted by the control group, except no acupuncture intervention, must be the same as the experimental group .We excluded trials comparing one acupuncture therapy with another, or trials comparing the use of other non- acupuncture related therapy in this review, and trials where acupuncture therapy were not the main intervention were excluded. No limitations were imposed concerning the duration of the application, dosage, or the form of the acupuncture therapy used. We included trials that allowed concurrent use of other medications such as analgesics, antitussives, antipyretics, or mucolytics if they allowed equal access to such medication.

Information sources: Eight major English and Chinese electronic databases will be searched: PubMed,Embase,Cochrane Library, Web of Science, CNKI(China National Knowledge Infraatructure), VIP (China Science Technology Journal Database), Wanfang Database, Sino-Med Database (including China Biology Medicine disc(CBM)).

Main outcome(s): 1.Cough-related outcomes including:
a.time to resolution of cough;
b.sputum production, defined as proportion of participants with or without sputum;
c.proportions of participants with cough, night cough, productive cough.
2.Global assessment of improvement by clinicians at follow-up.
3.General clinical outcomes including:
a.severity of symptoms;
b.activity limitations;
c.abnormal lung examination at a designated follow-up visit.

Additional outcome(s): 1.VAS score; 2.Adverse effects.

Quality assessment / Risk of bias analysis: The Cochrane Collaboration's risk of bias assessment tool will be used to evaluate the methodological quality of each trial included in this review with respect to the following factors:random sequence generation and allocation concealment (selection bias);blinding of participants and personnel (performance bias); blinding of outcome assessment (detection bias):incomplete outcome data (attrition bias);selective reporting(reporting bias);and other bias. Each project will be classified as high risk, low risk or unclear risk as the result of the evaluation.

Strategy of data synthesis: The retrieved literature will be imported into EndNote 20 software and duplicate literature will be removed. 2 researchers will independently assess the included literature and abstracts,Extract details of the assessed trials and outcome data, and create a data, record of the extracted data. 3 researchers independently conducted the literature review and evaluated the final included studies; disagreements were resolved by consensus.

Subgroup analysis: For cough, there are different severity and TCM syndrom; for intervention, there are different type of acupuncture therapy; and there are different type of control group.These all can lead to heterogeneity. In order to explore the treatment effects respectively, we plan to conduct subgroup analysis for different control group (such as Acupuncture vs western medicine, Acupuncture+western medicine vs western medicine, Acupuncture vs chinese herbal medicine, Acupuncture+chinese herbal medicine vs chinese herbal medicine, Acupuncture +moxibustion vs moxibustion, Acupuncture+cupping vs cupping).

Sensitivity analysis: For the main outcome with important positive significance, when the literature conditions are met, the random method is compared according to the methodological quality ofthe literature. Clear/unclear, double-blind use or not;when the combined results are in a critical state and the heterogeneity is small,compare results of random effects model and fixed effects model. If necessary,leave each individual study out to assess the weight of the research.

Language restriction: English and Chinese.

Country(ies) involved: China.

Keywords: Cough, Acupuncture, Systematic review, Meta analysis.

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