INPLASY PROTOCOL

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Conflicts of interest:
None declared.

Effectiveness and safety of acupuncture as a complementary therapy for skin pruritus after uremia hemodialysis: A protocol of systematic review and meta-analysis

Yang, X[1]; Wang, L[2]; Xian, J[3]; Yu, ZR[4]; Zhang, X[5]; Zhang, CY[6]; Zhang, X[7]; Yu, HJ[8].

Review question / Objective: **This systematic review aims to identify and critically summarize randomized controlled trials of acupuncture in the treatment of uremic pruritus after hemodialysis. A comprehensive understanding of the current level of evidence in this work will provide evidence to determine whether acupuncture is an effective intervention in uremic pruritus.**
Condition being studied: **Uremic pruritus is a common problem in patients with end-stage renal failure on hemodialysis.As a classical method of traditional Chinese medicine, acupuncture has been used to treat Uremic pruritus in clinical practice.There is an urgent need to evaluate the clinical efficacy of acupuncture for Uremic pruritus.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 30 November 2021 and was last updated on 02 December 2021 (registration number INPLASY2021110112).

INTRODUCTION

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classical method of traditional Chinese medicine, acupuncture has been used to treat Uremic pruritus in clinical practice.There is an urgent need to evaluate the clinical efficacy of acupuncture for Uremic pruritus.

METHODS

Search strategy: We will search PubMed (1966 to November 2021), the Cochrane Central Register of Controlled Trials (update to November 2021), EMBASE (1980 to November 2021), China National Knowledge Infrastructure (CNKI) (1979 to November 2021), Wan Fang Data (1980 to November 2021), VIP database (1989 to November 2021), Chinese Biomedical Database (1978 to November 2021) and TCM Literature Analysis and Retrieval Database (1949 to November 2021). The search terms used were “acupuncture AND (UP OR pruritus OR itch OR itching) AND (chronic renal disease OR chronic renal failure OR chronic kidney disease OR chronic kidney failure OR ESRD) AND (hemodialysis OR peritoneal dialysis).

Participant or population: Participants will include patients diagnosed as uremic pruritus in accordance with international standards.The internationally adopted diagnostic criteria for uremic pruritus are as follows :(1) Patients with uremia period rule out other diseases caused by itching; (2) Itchy at least3 days in 2 weeks, and itchy several times a day, each for several minutes, affecting the patient ' s life ; (3) Skin itching in a specific pattern that lasts for more than 6 months。At the same time also need to satisfy maintaining hemodialysis for longer than 6 months.

Intervention: Experimental intervention: we will only include studies that interventions involved acupuncture alone or combined with other routine pharmacotherapy, as well as those with control groups, which can verify the therapeutic effect of acupuncture. The acupuncture treatment defined as needle at acupoints on the meridians, including manual acupuncture or electroacupuncture, excluding other acupuncture treatments such as ear acupuncture, scalp acupuncture, dryneedling, acupressure. Control intervention: trials in which the control group will include placebo, and conventional treatments. Conventional treatments include drugs recommended by the international or domestic authorized clinical guidelines.

Comparator: Control intervention: trials in which the control group will include placebo, and conventional treatments. Conventional treatments include drugs recommended by the international or domestic authorized clinical guidelines.

Study designs to be included: We will include all randomized controlled trials(RCTs) of acupuncture therapy for uremic pruritus without any limitation of blinding or publication language, and we will also exclude cohort studies, case reports, and duplicate publications.

Eligibility criteria: Participants will include patients diagnosed as uremic pruritus in accordance with international standards.At the same time also need to satisfy maintaining hemodialysis for longer than 6 months. At the same time also need to satisfy maintaining hemodialysis for longer than 6 months. Experimental intervention: we will only include studies that interventions involved acupuncture alone or combined with other routine pharmacotherapy, as well as those with control groups, which can verify the therapeutic effect of acupuncture. Control intervention: trials in which the control group will include placebo, and conventional treatments.We will include all randomized controlled trials(RCTs) of acupuncture therapy for uremic pruritus

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Database (1978 to November 2021) and TCM Literature Analysis and Retrieval Database (1949 to November 2021). We will search the US National Institutes of Health Ongoing Trials Register, the WHO International Clinical Trials Registry Platform, Chinese Clinical Trial Registry and Google Scholar for any relevant ongoing or unpublished trials.

Main outcome(s): The primary outcomes included visual analogue scale (VAS) and pruritus VAG score. With visual analogue scale and itching VAG score of itching degree to compare before and after the treatment. The secondary outcomes included Blood phosphorus, serum Ca, serum parathyroid hormone and histamine levels.

Quality assessment / Risk of bias analysis: The two authors(XY and XZ) will independently assess the bias risk of each study using Cochrane collaboration tools. We will evaluate the method through six projects, including performance deviation, detection deviation, friction deviation, reporting deviation and other deviation .The assessment will be classified into 3 levels: “Low risk,” “High risk,” or “Unclear risk.” Any disagreements between the 2 reviewers will be resolved by discussion and consensus among all authors.

Strategy of data synthesis: Data synthesis. The meta-analysis will be conducted using the Review Manager V.5.3 software. We will describe the effect size with RR for dichotomous data, and MD or SMD for continuous data. The Cochrane Handbook for Systematic Reviews of Interventions Version 6 does not suggest that the choice between a fixed-effect and a random-effects meta-analysis based on a statistical test for heterogeneity. We will use fixed-effect models for the primary analyses, yet, we will also present random-effects estimates confirming the results.

Subgroup analysis: If a sufficient number of randomized controlled trials are included in the review, we plan to conduct subgroup analysis to explore the sources of heterogeneity. Subgroup analysis will be conducted based on the type of acupuncture (manual acupuncture or electroacupuncture), the testing time of secondary outcomes (3 or 7 days after intervention).

Sensitivity analysis: We will conduct a sensitivity analysis will be performed to evaluate the robustness of the results. We will remove the low-level quality study one by one and then compile the data to assess the impact of sample size, study quality, statistical method, and missing data on the result of this work.

Country(ies) involved: China.

Keywords: Uremic pruritus; hemodialysis; end-stage renal disease; acupuncture; protocol; systematic review and meta-analysis.

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