

INPLASY PROTOCOL

To cite: Dai et al. Acupuncture combined with Massage in the treatment of ankle injury: A protocol for systematic review and meta-analysis. Inplasy protocol 2022110005. doi: 10.37766/inplasy2022.11.0005

Received: 02 November 2022

Published: 02 November 2022

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Support: None.

Review Stage at time of this submission: Preliminary searches.

Conflicts of interest:
None declared.

Acupuncture combined with Massage in the treatment of ankle injury: A protocol for systematic review and meta-analysis

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Review question / Objective: We aim to compare the efficacy and safety of acupuncture combined with massage with acupuncture and related therapies for ankle injury using systematic review and meta-analysis.

Condition being studied: Ankle injury, one of the most common sports injury caused by an inversion or eversion of the foot in plantar flexion, which mainly occurs in the lateral ankle. Patients with ankle injury mainly pain on the outside ankle and under the lateral ankle accompanied by various degrees of bruising, swelling and bleeding. The main treatment of ankle injury are surgical, conservative treatment and functional conservative treatment. Acupuncture, as a key component of traditional chinese medicine(TCM),has also paly a important role in the treatment of ankle injury. While the effective of acupuncture combined with massage for ankle injury is unclear.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 02 November 2022 and was last updated on 02 November 2022 (registration number INPLASY2022110005).

INTRODUCTION

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METHODS

Search strategy: (((randomized controlled trial[Publication Type] OR randomized[Title/Abstract] OR placebo[Title/Abstract]) AND (acupuncture OR needle OR warm acupuncture OR electroacupuncture OR moxibustion)) AND (Massage OR Tuina OR Zone Therapy OR Therapies, Zone OR Zone Therapies OR Therapy, Zone OR Massage Therapy OR Massage Therapies OR Therapies, Massage OR Therapy, Massage)) AND (Ankle Injuries OR Ankle Injury OR Injury, Ankle OR Injuries, Ankle OR Ankle Sprains OR Ankle Sprain OR Sprain, Ankle OR Sprains, Ankle OR Syndesmotic Injuries OR Injuries, Syndesmotic OR Injury, Syndesmotic OR Syndesmotic Injury).

Participant or population: Patients who are diagnosed with ankle injury of any sex, age or race. However, patients who have been treated by surgical treatment will be excluded.

Intervention: Acupuncture combined with massage, combinations of different acupuncture therapies and combinations of acupuncture therapies with other conservative treatment will be included.

Comparator: Different acupuncture therapies from intervention groups and conservative treatments will be included.

Study designs to be included: Randomized controlled trials (RCTs).

Eligibility criteria: Clinical trials in accordance with PICOS which are reported in English or Chinese included.

Information sources: China National Knowledge Infrastructure, Wanfang Database, VIP Database, Chinese Biomedical Database, Chinese Clinical Trial Register, MEDLINE (via Pubmed), Web of Science, EMBASE, Cochrane Library and WHO International Clinical Trials Registry Platform will be searched from initial until October 2022.

Main outcome(s): 1. Improvement of symptoms and function in ankle injury measured by Global impression or AOFAS Ankle Hindfoot Scale; 2. Pain intensity measured by Visual Analogue Scale (VAS) or other scales.

Quality assessment / Risk of bias analysis: Cochrane tool will be used to evaluate the risk of bias by following means: random sequence generation, allocation concealment, blinding of participants and personnel, blinding of outcome assessment, incomplete outcome data, selective reporting and other sources of bias.

Strategy of data synthesis: In our study, we select RevMan 5.3 software for statistical analysis. The risk ratio and 95% confidence intervals (CIs) were collected for enumeration data, while the mean difference or standardized mean difference and 95% CIs were used to calculate continuous outcome data. Heterogeneity among trials will be identified by the I² and Chi-squared test statistics. If the included studies have low heterogeneity (I² ≤ 0.05), we will select a fixed-effects model for pooling data across studies. Otherwise, a random-effects model will be used. To evaluate publication bias, we will construct funnel plot, labbe plot and galbr plot using STATA 14 software if the number of included studies is sufficient (>10 studies). A symmetrical funnel plot indicates no possibility of publication bias, whereas an asymmetrical funnel plot indicates a high possibility of publication bias. If we identify publication bias through analysis of the funnel plot, we will discuss possible reasons such as small-study effects or cut-and-complement method to eliminate publication bias.

Subgroup analysis: Meta-regression or subgroup analysis will be applied to analyze the source of heterogeneity. We will provide a narrative summary if we couldn't identify main source of heterogeneity.

Sensitivity analysis: We will remove studies which rated as high risk of bias from funnel plot, labbe plot and galbr plot to perform sensitivity analysis to assess the robust of the result.

Country(ies) involved: China.

Keywords: Ankle injury;Acupuncture with massage; Meta-analysis.

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