# INPLASY PROTOCOL

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Conflicts of interest: None.

# Systematic review of the efficacy and adverse reactions of blood-letting puncture and cupping therapy in the treatment of herpes zoster

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**Review question / Objective:** Systematic review of the efficacy and adverse reactions of blood-letting puncture and cupping therapy in the treatment of herpes zoster, and provide effective evidence for clinical practice.

**Condition being studied:** Herpes zoster is mainly manifested as clustering herpes along the nerve distribution area and severe neuralgia. After antiviral, nutritional nerve and other treatments, herpes disappeared, and no postoperative neuralgia appeared as a clinical cure.

Study designs to be included: Study type: Randomized controlled trial. Research subjects: Herpes zoster patients with clear diagnostic criteria.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 17 April 2020 and was last updated on 17 April 2020 (registration number INPLASY202040100).

# **INTRODUCTION**

**Review question / Objective:** Systematic review of the efficacy and adverse reactions of blood-letting puncture and cupping therapy in the treatment of herpes zoster, and provide effective evidence for clinical practice. **Condition being studied:** Herpes zoster is mainly manifested as clustering herpes along the nerve distribution area and severe neuralgia. After antiviral, nutritional nerve and other treatments, herpes disappeared, and no postoperative neuralgia appeared as a clinical cure.

#### **METHODS**

Search strategy: We collected randomized controlled trials about treatment of herpes zoster mainly by blood-letting puncture and cupping therapy (published from the date of establishment of each database to June 1 of 2019) from databases of CNKI, Wanfang, VIP, Chinese Biomedical Document Service System (Sino Med), Pub Med, Embase, Cochrane Library by using key words of acupuncture" bloodletting" "cupping" "herpes z o ster" "postherpetic neuralgia".

Participant or population: Inclusion criteria: Study type: Randomized controlled trial. Research subjects: Herpes zoster patients with clear diagnostic criteria. Intervention: The intervention group was mainly treated with blood-letting puncture and cupping, including plum blossom bloodletting or triangular needle bloodletting combined with cupping, and the control group was treated with western medicine.

Intervention: The intervention group was mainly treated with blood-letting puncture and cupping, including plum blossom bloodletting, triangular needle bloodletting, acupuncture, fire needle combined with cupping.

**Comparator:** The control group was treated with western medicine, including antiviral, nutritional nerve, anti-inflammatory and analgesic, etc.

Study designs to be included: Study type: Randomized controlled trial. Research subjects: Herpes zoster patients with clear diagnostic criteria.

Eligibility criteria: Exclusion criteria: Duplicate publications, published publications are abstracts, and the full texts are still unavailable after contacting the authors. The data in the literatures are incomplete or have obvious errors. The intervention group is the literatures of blood-letting puncture and cupping combined medicine (Chinese or Western Medicine), articles in which the bloodletting puncture and cupping was not the main intervention in the intervention group; those with a dropout rate of  $\geq 20\%$ .

Information sources: None.

Main outcome(s): Outcome indicators: Effectiveness [effectiveness = (healing + markedly effective + effective) / total number of cases], pain symptoms (VAS score, 30% time for pain relief, pain duration, PHN incidence) and adverse reactions.

Data management: According to the **PRISMA** flow chart, two researchers independently screened the literature according to the inclusion and exclusion criteria and checked each other. The dissatisfied literature was resolved through discussion or judged by a third researcher, and the final consistency was required to be not less than 80%. Excel 2013 was used to pre-design the data extraction table and extract the information, including the basic information of the literature, the basic situation of the research object, the intervention methods of the experimental and control groups, the outcome indicators, and the methodological information of the literature.

Quality assessment / Risk of bias analysis: The evaluation was performed according to the bias risk assessment tool provided by Cochrane Handbook 5.2.0, and Rev Man 5.3.5 software was used to generate the bias risk map. The content includes methods for generating random sequences, allocation hiding, blinding subjects and researchers, blinding outcome evaluators, incomplete outcome data, selective publication, and other biases, which can be divided into "low risk" "unclear"and "High Risk" levels.

Strategy of data synthesis: Rev Man 5.3.5 software was used for the meta-analysis. The relative data (relative ratio, RR) was used for the count data, and the weighted mean difference (WMD) was used as the effect data for the measurement data.  $\chi^2$  was used for heterogeneity test.

Subgroup analysis: If the heterogeneity test indicates that the heterogeneity is high, it is not suitable to directly combine the effect amounts for meta-analysis. The random effect model and sensitivity analysis are used to test the reliability of the results, analyze the sources of heterogeneity, and conduct subgroup analysis on the factors that may lead to heterogeneity.

Sensibility analysis: If the heterogeneity test indicates that the heterogeneity is high, it is not suitable to directly combine the effect amounts for meta-analysis. The random effect model and sensitivity analysis are used to test the reliability of the results, analyze the sources of heterogeneity, and conduct subgroup analysis on the factors that may lead to heterogeneity.

# Country(ies) involved: China.

Keywords: Blood-letting puncture and cupping therapy; Herpes zoster; Randomized controlled trials; Systematic review; Meta-analysis.

# Contributions of each author:

Author 1 - Author 1 drafted the manuscript. Author 2 - The author provided statistical expertise.

Author 3 - The author read, provided feedback and approved the final manuscript.

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