INPLASY PROTOCOL

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A comparison of the efficacy and safety of traditional Chinese medicine external treatment for the knee osteoarthritis : A protocol for systematic review and network meta-analysis

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Review question / Objective: **A comparison of the efficacy and safety of traditional Chinese medicine external treatment for the knee osteoarthritis : A protocol for systematic review and network meta-analysis.**
Condition being studied: **Knee osteoarthritis (KOA), also known as degenerative osteoarthritis, is a common and frequently occurring disease in orthopedics with cartilage degeneration as the pathogenic cause and articular bone hyperplasia as the sign. Many studies have confirmed that KOA can be effectively treated by traditional Chinese medicine (TCM) external treatment. So we take advantage of the method of network meta-analysis to systematically compare the efficacy and safety of different types of TCM external treatment for the KOA.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 01 December 2020 and was last updated on 01 December 2020 (registration number INPLASY2020120001).

INTRODUCTION

Review question / Objective: **A comparison of the efficacy and safety of traditional Chinese medicine external treatment for the knee osteoarthritis : A protocol for systematic review and network meta-analysis.**

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METHODS

Participant or population: Compliance with KOA diagnostic criteria proposed by the American Rheumatology Society in 1995. Middle-aged and elderly patients over 40 years old.

Intervention: The experimental group was treated with TCM external treatments and Western medicine combined. The TCM external treatments includes Massage, Tai chi, yoga and five-poultry opera, etc.

Comparator: The control group was treated with Western medicine only.

Study designs to be included: All RCT studies (e.g., Massage, Tai chi, yoga, five-poultry opera, etc.) of TCM external treatments for KOA will be included. The language of studies is restricted to English and Chinese.

Eligibility criteria: Compliance with KOA diagnostic criteria proposed by the American Rheumatology Society in 1995. Middle-aged and elderly patients over 40 years old.

Information sources: EMBASE, PubMed,Web of Science, CnKI, VIP, Wanfang, and CBM. Furthermore, we will also search for trials that are unpublished, including the International Clinical Trials Registry Platform, the NIH Clinical Trails, and the Chinese Clinical Register.

Main outcome(s): The main evaluation indicators include Lysholm score, WOMAC score, NRS score, and Health Survey Summary Scale SF-36.

Quality assessment / Risk of bias analysis: The grading of recommendations assessment, development, and evaluation (GRADE) method will be used to evaluate the quality of evidence. There are several aspects: risk of bias, indirectness, inconsistency, imprecision, and publication bias.

Strategy of data synthesis: We will research on external treatment of KOA by traditional Chinese medicine using randomized controlled trials (RCTs) in EMBASE, PubMed (as shown in Table 1), Web of Science, CnKI, VIP, Wanfang, and CBM. Furthermore, we will also search for trials that are unpublished, including the International Clinical Trials Registry Platform, the NIH Clinical Trails, and the Chinese Clinical Register.

Subgroup analysis: The subgroup analysis will be conducted to explore age, race, different types of TCM external treatments, treatment time, methodological quality, etc. when Heterogeneity is high.

Sensibility analysis: Some measures will be used to ensure the credibility of the research results including analysis of the same data using different statistical methods and exclusion of low-quality studies.

Country(ies) involved: China.

Keywords: network meta-analysis, protocol, KOA, traditional Chinese medicine external treatment.

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