INPLASY

The effects of physical therapy combined with joint mobilization in treatment of knee osteoarthritis: A protocol for meta-analysis ofrandomized controlled trials

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ADMINISTRATIVE INFORMATION

Support - Heilongjiang University of Chinese Medicine.

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202430096

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 24 March 2024 and was last updated on 24 March 2024.

INTRODUCTION

Review question / Objective Is physical therapy combined with joint mobilization more effective than conventional therapy in the Treatment of Knee Osteoarthritis.

Condition being studied Knee osteoarthritis is a common degenerative joint disease featured by pain and the reduction of knee function, which has seriously affected the life quality of millions of people. As an alternative therapy that has been widely used in recent years, electroacupuncture was shown to have a therapeutic effect on pain management, which is an essential part of knee osteoarthritis treatment. Still, there has been no high-quality evidence on electroacupuncture versus analgesic for the treatment.

METHODS

Participant or population Patients of any age, gender, or ethnicity with a clinical diagnosis of KOA following the diagnostic criteria of standard diagnostic criteria (the Chinese Medical Association criteria or the American College of Rheumatology criteria) will be included. Patients who underwent total knee arthroplasty will be excluded.

Intervention Physical therapy combined with joint mobilization.

Comparator Only joint mobilization or conventional therapy.

Study designs to be included RCT.

Eligibility criteria Efficiency、visual analogue scale，（VAS）、Western Ontario and McMaster Universities osteoar-thritis index，（WOMAC）、Lysholm.

Information sources Web of Science, The Cochrane Library, PubMed, EMBASE, China National Knowledge Infrastructure (CNKI), Wan Fang Digital Journals, SinoMed, and VIP information (VIP).

Main outcome(s) Efficiency、visual analogue scale，（VAS）、Western Ontario and McMaster Universities osteoar-thritis index，（WOMAC）、Lysholm.

Quality assessment / Risk of bias analysis Two authors (Haonan Bai and Hongtao Li) will independently evaluate the quality of the included literature, mainly according to the Cochrane Collaboration's tool for assessing the risk of bias in randomized trials (RoB2). The Cochrane Risk of Bias tool contains five specific domains: randomisation process, deviations from the intended interventions, missing outcome data, measurement of the outcome, selection of the reported result. Two authors will grade the above contents as "low risk","high risk" or "some concerns" and cross-check the obtained results. Any conflicts or discrepancies will be resolved by discussion, or a third researcher (Linran Wang) will be consulted to achieve agreement. Finally, a bias risk diagram will be drawn using RevMan 5.4 software.

Strategy of data synthesis The software Review Manager 5.4 will be used. In addition, we will synthesize these data to provide pooled treatment effects. The measurement data will use the mean difference (MD) as the effect indicator for continuous variables. Each effect indicator will be expressed with a 95% confidence interval.
Heterogeneity will be tested by I^2. The heterogeneity and size of each study result will be judged using statistical methods. For studies with no statistical heterogeneity ($I^2 < 50\%$, $P > 0.1$), the analysis will be performed using a fixed-effect model, whereas a randomized effects model will be applied if studies have significant statistical heterogeneity.
According to sample size, methodological quality, and the effect of missing data, when the outcome analyses involve considerablea degree of heterogeneity, sensitivity analysis will be conducted to determine the impact of studies with a higher risk of bias on the overall estimate of the effect of the intervention and identify the robustness of the meta-analysis result.

Subgroup analysis Subgroup analysis will be performed based on the availability of sufficient data and the results of data synthesis. If heterogeneity exists, subgroup analysis will be conducted to determine the source of heterogeneity. Specific characteristics, including waveform and courses of KOA, will be analyzed to determine whether they would cause heterogeneity.

Sensitivity analysis The STATA software performs a sensitivity analysis to reflect the sensitivity of the article by the change in the effect size after deleting one of the articles.

Country(ies) involved China.

Keywords knee osteoarthritis; Joint mobilization; Mesh meta-analysis; physiotherapy.

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