

INPLASY PROTOCOL

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None declared.

Systematic evaluation and meta-analysis of traditional Chinese medicine combined with intra-articular injection of PrP in the treatment of knee osteoarthritis

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Review question / Objective: The efficacy of traditional Chinese medicine combined with intra-articular injection of PrP in the treatment of knee osteoarthritis (KOA) was systematically evaluated and meta-analyzed.

Condition being studied: The treatment of KOA with integrated traditional Chinese and Western medicine has gradually shown great advantages, but its exact curative effect lacks the strong support of multi center and large sample clinical experiments. This study intends to use the method of systematic evaluation to retrieve the RCT of KOA and conduct meta-analysis, in order to further evaluate the clinical efficacy and relevant evidence-based medical evidence of traditional Chinese medicine combined with intra-articular injection of PrP in the treatment of KOA, in order to provide evidence-based basis for clinicians to use drugs reasonably.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 17 March 2022 and was last updated on 17 March 2022 (registration number INPLASY202230078).

INTRODUCTION

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the RCT of KOA and conduct meta-analysis, in order to further evaluate the clinical efficacy and relevant evidence-based medical evidence of traditional Chinese medicine combined with intra-articular injection of PrP in the treatment of KOA, in order to provide evidence-based basis for clinicians to use drugs reasonably.

METHODS

Participant or population: Patients with knee osteoarthritis.

Intervention: Traditional Chinese medicine combined with platelet rich plasma.

Comparator: Other medicine or traditional Chinese medicine treatment.

Study designs to be included: Taking "traditional Chinese medicine", "PRP" and "knee osteoarthritis" as key words, the databases of CNKI, VIP, Wanfang Data, PubMed, EMBASE, web of science, Cochrane, Scopus and EBSCO were searched by computer, and the relevant literature was searched manually to search the efficacy of traditional Chinese medicine combined with intra-articular injection of PrP in the treatment of knee osteoarthritis. The retrieval time limit is from database establishment to February 2022. The research included in this paper is a randomized controlled study.

Eligibility criteria: For patients who meet the general diagnostic criteria of traditional Chinese and Western medicine koa, the intervention measures are that the subjects in the control group are treated with simple western medicine or traditional Chinese medicine or other Western medicine combined with traditional Chinese medicine, and the experimental group is treated with traditional Chinese medicine combined with intra-articular injection of PRP.

Information sources: The databases of CNKI, VIP, Wanfang Data, PubMed, EMBASE, web of science, Cochrane, Scopus and EBSCO were searched by

computer to collect RCTs about the efficacy of traditional Chinese medicine combined with intra-articular injection of PrP in the treatment of KOA.

Main outcome(s): A total of 24 RCTs were included. Meta analysis showed that the effective rate $WMD = 3.36, 95CI\%: 2.31 \sim 4.91$, VAS score $WMD = -0.93, 95CI\%: -1.04 \sim -0.82$, WOMAC score $WMD = -4.16, 95CI\%: -5.05 \sim -3.27$, Lysholm score $WMD = 7.75, 95CI\%: 5.50 \sim 9.99$, serum TNF- α level $WMD = -2.98, 95CI\%: -3.78 \sim -2.18$, serum IL-6 level $WMD = -5.35, 95ci\%: -6.21 \sim -4.49$. The improvement of six indexes in the experimental group was better than that in the control group, and the difference was statistically significant.

Quality assessment / Risk of bias analysis: Two researchers independently evaluated the risk of bias in the included study and cross checked the results. The bias risk assessment adopts the RCT bias risk assessment tool recommended by Revman 5.4.

Strategy of data synthesis: Revman 5.4 software was used for statistical analysis. The continuous data adopts the mean difference as the effect analysis statistic, and the binary variable adopts the odds ratio as the effect analysis statistic. Each effect quantity provides its 95% CI, which is statistically significant when $p < 0.05$. The heterogeneity among the included studies was measured by X^2 Analyze the inspection (the inspection level is $\alpha = 0.05$), combined with I^2 Quantitatively judge the heterogeneity. If the heterogeneity is not statistically significant, the fixed effect quantity model is selected for synthesis analysis, and if the heterogeneity is statistically significant, the random effect quantity model is selected for synthesis analysis; If there is statistical heterogeneity among the research results, the sources of heterogeneity are further analyzed. After excluding the influence of obvious clinical heterogeneity, the random effect model is used for meta-analysis. The obvious clinical heterogeneity was treated by

subgroup analysis or sensitivity analysis, or only descriptive analysis.

Subgroup analysis: Subgroup analysis was not performed.

Sensitivity analysis: Sensitivity analysis was carried out by eliminating individual studies one by one.

Country(ies) involved: China.

Keywords: Traditional Chinese Medicine, Platelet-Rich Plasma, PRP, Osteoarthritis, Knee.

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