

INPLASY PROTOCOL

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Conflicts of interest:
None declared.

Clinical efficacy and safety of intra-articular injection therapy for hip osteoarthritis: a systematic review and network meta-analysis of RCTs

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Review question / Objective: There are many choices for intra-articular therapy of hip osteoarthritis, including isotonic saline, corticosteroids, hyaluronic acid, platelet-rich plasma or anesthetic. This review aims to determine the clinical efficacy and safety of different intra-articular treatment for hip osteoarthritis.

Information sources: The search strategy specifies the search keyword terms or medical subject heading terms (MESH) related to the participants of interest, the exposures, the outcomes of interest, and the study type in various databases including PubMed, Web of Science, EMBASE, Medline, Cochrane Library and Clinicaltrial.gov. up to Feb 16, 2023. All related English publications will be included.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 21 February 2023 and was last updated on 21 February 2023 (registration number INPLASY202320092).

INTRODUCTION

Review question / Objective: There are many choices for intra-articular therapy of hip osteoarthritis, including isotonic saline, corticosteroids, hyaluronic acid, platelet-rich plasma or anesthetic. This review aims

to determine the clinical efficacy and safety of different intra-articular treatment for hip osteoarthritis.

Condition being studied: The clinical symptoms of hip osteoarthritis is characterized with persistent pain. The hip

joint will progress to dysfunction as the disease progresses, so the early conservative treatment for relieving pain is necessary.

METHODS

Search strategy: The search strategy specifies the search keyword terms or medical subject heading terms (MESH) related to the participants of interest, the exposures, the outcomes of interest, and the study type in various databases including PubMed, Web of Science, EMBASE, Medline, Cochrane Library and Clinicaltrial.gov. up to Feb 16, 2023. All related English publications will be included.

Participant or population: Inclusion criteria: 1 patients aged over 20 years with early or moderate hip osteoarthritis; 2 patients recived intra-articular injection of drugs inclduing corticosteroids, hyaluronic acid, platelet-rich plasma or anesthetic; 3 patients reported VAS score, hip function score; 4 RCTs.exclusion criteria: 1 patients diagnosed with end-stage hip osteoarthritis.

Intervention: Intra-articular injection of corticosteroids, hyaluronic acid, platelet-rich plasma or anesthetic.

Comparator: Intra-articular injection of isotonic saline.

Study designs to be included: RCT.

Eligibility criteria: Inclusion criteria: 1 RCT; 2 reporting various score related to the hip joint; exclusion criteria: non-RCTs.

Information sources: The search strategy specifies the search keyword terms or medical subject heading terms (MESH) related to the participants of interest, the exposures, the outcomes of interest, and the study type in various databases including PubMed, Web of Science, EMBASE, Medline, Cochrane Library and Clinicaltrial.gov. up to Feb 16, 2023. All related English publications will be included.

Main outcome(s): self-reported current intensity of hip pain (VAS score), function score of hip joint such as WOMAC and life quality score such as SF-12 score.

Additional outcome(s): Occurrence and rate of adverse events.

Data management: All the studies will be included according to the inclusion and exclusion criteria completely. Two authors will independently extract data. Any disagreement will be resolved by discussion until consensus is reached or by consulting a third author. The following data will be extracted: author, year of publication, country where the study was conducted, study period, original inclusion criteria, total number of people included in the study.

Quality assessment / Risk of bias analysis: All included studies are RCTs, and their quality assessment will be carried out according to the Cochrane ROB tool.

Strategy of data synthesis: The Stata software (version 14) will be used for data synthesis, with the help of NMA package. In meta-analysis, the statistical heterogeneity would be tested by Q statistics. If significant heterogeneity exists, the random effect model will be used. If there is no significant heterogeneity, the fixed effect model will be used.

Subgroup analysis: Non-applicable.

Sensitivity analysis: The sensitivity analysis was performed to evaluated the reliability of the pooled results through removing some study from analyzed studies in each analysis.

Language restriction: English.

Country(ies) involved: China.

Keywords: Hip osteoarthritis; intra-articular injection; meta-analysis; randomized controlled trials.

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