

INPLASY

Efficacy and safety of Sodium hyaluronate combined with Celecoxib for Knee osteoarthritis: A systematic review and meta-analysis

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ADMINISTRATIVE INFORMATION

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Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 27 September 2023 and was last updated on 27 September 2023.

INTRODUCTION

Review question / Objective Due to the large cost of joint replacement for surgical treatment of knee osteoarthritis, there are many complications in elderly patients, and there are many contraindications to surgery, and conservative treatment is still based on drugs. To further evaluate the efficacy and safety of sodium hyaluronate combined with celecoxib for the treatment of osteoarthritis of the knee.

Condition being studied Knee osteoarthritis (KOA) is one of the most common degenerative diseases causing disability in recent years. KOA is also becoming the most common joint disease in these years, affecting an estimated 240 million people worldwide. In the meantime, it is also the most common cause of reduced limb mobility in

adults. With the continuous intensification of the aging process of the population, knee osteoarthritis has the characteristics of a high incidence and high disability rate, which greatly damages the quality of life of patients. There are many pathogenesis factors and complex mechanisms of knee osteoarthritis, and the main treatment mode in the early clinical stage is symptomatic treatment, and joint replacement surgery is performed in the later stage to alleviate its symptoms.

METHODS

Search strategy We performed systematic searches in 7 electronic databases from January 2002 to August 2022: Medline, Embase, Scopus, CINAHL, CNKI, PubMed, and Web of Science. To identify randomized clinical trials that examine the

effectiveness of celecoxib combined with sodium hyaluronate in patients with KOA.

Participant or population (1) Identification of the included studies was done following the PICOS characteristics (Participants, Intervention, Comparison, Outcomes, and Study type) (2) Participants were only patients with KOA. (3) The only study type eligible was randomized controlled clinical trial. (4) The control group/observation group can only be celecoxib combined with sodium hyaluronate for the treatment of knee osteoarthritis.

Intervention celecoxib combined with sodium hyaluronate for the treatment of knee osteoarthritis.

Comparator effectiveness of celecoxib combined with sodium hyaluronate in patients with KOA.

Study designs to be included To identify randomized clinical trials.

Eligibility criteria (1) Identification of the included studies was done following the PICOS characteristics (Participants, Intervention, Comparison, Outcomes, and Study type) (2) Participants were only patients with KOA. (3) The only study type eligible was randomized controlled clinical trial. (4) The control group/observation group can only be celecoxib combined with sodium hyaluronate for the treatment of knee osteoarthritis. (5) Publications are limited to January 2002 to August 2022.

Information sources We performed systematic searches in 7 electronic databases from January 2002 to August 2022: Medline, Embase, Scopus, CINAHL, CNKI, PubMed, and Web of Science.

Main outcome(s) (①: Clinical efficiency rate; ②: VAS: Visual analog score; ③: Lysholm knee score; ④: Adverse reactions).

Quality assessment / Risk of bias analysis All 9 studies reported the outcome measures that were expected to be measured. No premature termination of the trial was found in the study. The incomplete data and selective reporting were rated as “low risk.” None of the 4 studies described other biases in detail and were rated as “unclear risk.” Four of these papers reported “high risk”.

Strategy of data synthesis 1. (((((Knee osteoarthritis) OR (KOA)) OR (Sodium hyaluronate))

OR (Celecoxib)) OR (Sodium glassate)) OR (Sodium vitrate):

2. (Sodium hyaluronate combined with Celecoxib) OR (Sodium glassate combined with Celecoxib) OR (Sodium vitrate combined with Celecoxib):

3. Random

4. #1 AND #2 AND #3.

Subgroup analysis No.

Sensitivity analysis Heterogeneity and inconsistency of pooled studies were assessed by the χ^2 test and I² statistics. Two-tailed P value < 0.05 was considered statistically significant. We assessed heterogeneity among individual effect estimates and we reported the P value of the χ^2 -based Cochran Q test. The variation in estimates attributable to heterogeneity is quantified by the measure I² metric for inconsistency.

Language restriction No.

Country(ies) involved China - Monash University, Hainan Medical University.

Keywords Sodium hyaluronate, Celecoxib, Knee osteoarthritis, Systematic review, Meta-analysis.

Contributions of each author

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