

INPLASY

The effects of lateral wedge insoles on the treatment of chronic pain in patients with knee osteoarthritis: A systematic review and meta-analysis

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Li, CL¹; Hu, JH²; Wu, N³; Wen, HJ⁴; Zhang, JH⁵; Li, HY⁶; Yin, S⁷; Feng, XD⁸.

Corresponding author:

changle Li

1872199875@qq.com

Author Affiliation:

Henan University of Chinese Medicine.

ADMINISTRATIVE INFORMATION

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Review Stage at time of this submission - Formal screening of search results against eligibility criteria.

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 06 December 2023 and was last updated on 06 December 2023.

INTRODUCTION

Review question / Objective The aim of this meta-analysis of randomized controlled Trials is to evaluate the efficacy of Lateral wedge insoles for knee osteoarthritis.

Condition being studied Osteoarthritis has been reported as one of the most common musculoskeletal disorders, affecting millions of people worldwide. It is characterised by pain, stiffness and decreased range of motion. This contributes to functional disability and loss of independence. This is especially the case in the elderly population. The knee is considered the most common form of osteoarthritis.

METHODS

Participant or population Knee osteoarthritis patients.

Intervention Lateral wedge insoles.

Comparator Neutral insoles or no insoles support.

Study designs to be included Randomised controlled trials(RCTs).

Eligibility criteria Studies were considered eligible for inclusion if they met the following criteria:(1)The searched literature must be randomised controlled trials;(2)type of participants must be patients sufferingfromKOA;(3)experimental studies should

be using wedge insole (control group includes flat insole, neutral insole); (4) At least one of the outcome indicators, including Visual Analogue Scale (VAS) scores, Western Ontario and McMaster Universities Arthritis Index (WOMAC) pain scores, Knee Injury and Osteoarthritis Outcome Scores (KOOS) pain scores.

Information sources The Cochrane Library, EMBASE, PubMed, CNKI (China National Knowledge Infrastructure), Wanfang database, and Weipu database were systematically searched from the earliest available date to September 2023.

Main outcome(s) The primary outcome was WOMAC pain score.

Additional outcome(s) The secondary outcomes were VAS score and KOOS pain score.

Quality assessment / Risk of bias analysis Two independent reviewers evaluate the risk of bias for RCTs by using the Cochrane Risk of Bias tool. Each study was evaluated based on the following 7 areas: random sequence generation, allocation concealment, blinding of participants and personnel, blinding of outcome assessment, incomplete outcome data, selective reporting, as well as other biases.

Strategy of data synthesis Review Manager Software (RevMan5.3) was used for the meta-analysis. Heterogeneity among the studies was evaluated using the I^2 statistic. The fixed effects model was used if the heterogeneity test did not reveal statistical significance ($I^2 < 0.1$). Otherwise, we adopted the random effects model. We conducted a sensitivity analysis if heterogeneity existed among the studies. All of the variables in the studies included in this meta-analysis were continuous, so we used the mean difference (MD) and 95% confidence interval (CI) to analyze the studies. We considered P values less than 0.05 to be statistically significant.

Subgroup analysis None.

Sensitivity analysis Sensitivity analysis was also conducted to evaluate the effect of the individual study data.

Country(ies) involved China.

Keywords Knee osteoarthritis; Lateral wedge insoles.

Contributions of each author

Author 1 - changle Li.
Email: 1872199875@qq.com
Author 2 - jiahui Hu.
Email: 1757730436@qq.com
Author 3 - nan Wu.
Email: wunanwy@126.com
Author 4 - hongjuan Wen.
Email: 1695538129@qq.com
Author 5 - jiahao Zhang.
Email: 1306698813@qq.com
Author 6 - huiying Li.
Email: lihuiying39@163.com
Author 7 - shuai Yin.
Email: yinshuai880910@163.com
Author 8 - xiaodong Feng.
Email: fxd0502@163.com