Comparison between lateral and medial wedged foot insoles in terms of pain and function for patients with medial compartment knee osteoarthritis: a literature review

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【Purpose】
Insoles are commonly used to improve symptoms in patients with medial knee osteoarthritis (OA). However, it is unclear whether lateral wedged insoles (LWI) or medial wedged insoles (MWI) are more effective in improving pain and function. The purpose of this study was to investigate which insole is better in terms of pain and function for patients with medial knee OA.

【Methods】
A PubMed search was performed on selected keywords related to knee OA. Selected keywords that related to knee osteoarthritis were "knee osteoarthritis" and "knee OA".

In addition to the words, "wedged insoles," "laterally elevated insoles," "medially elevated insoles," "varus insoles," "valgus insoles," "foot orthoses," "laterally elevated orthoses," "medially elevated orthoses," "varus orthoses," and "valgus orthoses" were combined.

We looked for articles only in English that investigated knee pain and function using the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC). Exclusion criteria were not to include knee symptoms, wedged insoles or knee OA patients.

【Results】
We found 141 articles using the abovementioned keywords. After using our algorithm, we found 25 articles related to pain and LWI and none related to MWI. There were many effective articles for pain. Related to WOMAC, LWI were 12 and MWI was 0. It was shown that variation in effect for WOMAC. There were no articles on MWI. However, there were a few studies that investigated LWI with medial arch support.

【Discussion】
LWI devices may be effective in improving pain and function in patients with knee OA. However, not enough studies on WOMAC were found. Furthermore, there were no articles on MWI devices. Therefore, further research on insoles for patients with knee OA is required, especially functional outcomes and medial support orthotic devices, including LWIs with medial arch support.