

# Comparison the effect of lateral wedge insole and acupuncture in medial compartment knee osteoarthritis: A randomized controlled trial.

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## Abstract

### BACKGROUND:

There is lack of well-designed trials evaluating structural benefits of non-pharmacologic therapies in knee osteoarthritis (OA). In this parallel-group randomized controlled trial, we aim to compare the possible advantages of lateral wedge insole and acupuncture in patients with medial knee OA.

### METHOD:

Patients with grade two or three of medial knee OA were randomly allocated to group one who received an in shoe lateral wedge and group two who underwent acupuncture. We assessed patients' pain, function and knee joint cartilage thickness before and after intervention. Paired t-test and independent samples t-test were used for in group and between group analyses. (Level of evidence: 2.)

### RESULTS:

Twenty patients in each group were recruited in the study. Pain significantly decreased after therapy in both groups one and two (paired t test,  $P < 0.001$ , 95% CI: 1.62-3.25 and 1.58-3.20 respectively). Function improved in each group (paired t test,  $P = 0.001$ , 95% CI of 0.94-2.38 in group one and 0.97-2.43 in group two). A non-clinically statistically significant difference regarding the femoral and tibial cartilage thickness was obtained in both groups one ( $P = 0.005$ , CI: -0.43-0.82 and  $P = 0.037$ , CI: -0.44-0.80 respectively) and two ( $P = 0.025$ , CI: -0.45-0.79 and  $P = 0.035$ , CI: -0.29-0.96 respectively). Between groups analysis showed no significant difference regarding abovementioned measures.

### CONCLUSION:

Both lateral wedge insole and acupuncture can be effective in the treatment of medial knee osteoarthritis without any superiority of one over the other. Iranian Registry of Clinical Trials: IRCT201201108235N1. URL: <http://irct.ir/searchen.php>.

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### KEYWORDS:

Acupuncture, Knee osteoarthritis, Lateral wedge insole, Magnetic resonance imaging

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