

The efficacy and safety of medical leech therapy for osteoarthritis of the knee: A meta-analysis of randomized controlled trials.

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BACKGROUND:

It is controversial on whether medical leech therapy is effective in improving pain and functional outcome in patients with knee osteoarthritis (OA). Therefore, we perform a meta-analysis from randomized controlled trials (RCTs) to evaluate the efficacy and safety of medical leech therapy in patients with knee OA.

MATERIALS AND METHODS:

The PubMed, EMBASE, ScienceDirect, and Cochrane Library databases were systematically searched for literature up to January 2018. RCTs involving medical leech therapy in patients with knee OA were included. Two independent reviewers performed independent data abstraction. The I^2 statistic was used to assess heterogeneity. A fixed or random effects model was adopted for meta-analysis. All meta-analyses were performed by using STATA 12.0.

RESULTS:

Four RCTs with **264 patients** were included in this meta-analysis. The current meta-analysis showed that there were significant differences in terms of visual analogue scale (VAS) scores and WOMAC scores at 1 week, 4weeks and 7 weeks compared with control groups. However, leech therapy was associated with a significantly higher incidence of adverse events. The overall evidence quality is moderate, which means that further research is likely to significantly change confidence in the effect estimate but may change the estimate.

CONCLUSION:

Medical leech therapy was associated with a **significantly improved outcome in pain relief and functional recovery in patients with symptomatic knee OA**. However, given the inherent limitations in the included studies, this conclusion should be interpreted cautiously.

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