
Moxibustion for treating pain: a systematic review

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CRD summary

This review assessed the effectiveness of moxibustion as a treatment option for pain and concluded that there was limited evidence for its effectiveness in treating osteoarthritis of the knee, but most of the existing trials have a high risk of bias. The cautious conclusions and recommendation for more rigorous studies appear appropriate.

Authors' objectives

To assess the evidence for or against the effectiveness of moxibustion as a treatment option for pain.

Searching

The reviewers searched MEDLINE, EMBASE, CINAHL, PsycINFO, Chinese Medical Database, The Cochrane Library and five Korean and three Japanese databases from inception to December 2009. Search terms were implied, but not clearly reported. No language restrictions were applied. Reference lists of obtained papers, two relevant journals and authors' personal files were searched for further relevant studies.

Study selection

Randomised clinical trials (RCTs) that tested moxibustion (direct or indirect) in patients with any type of pain where pain was a central symptom of their condition were eligible for inclusion. RCTs could be placebo-controlled, controlled against another treatment of documented effectiveness or compared with no treatment. Studies that compared moxibustion with other treatments of unproven effectiveness were excluded. It appeared that the primary outcome was reduction of pain.

All studies except one used indirect moxibustion. All included studies were conducted in China. Control group drug therapy included diclofenac sodium, magnesium sulfate and ribavirin. Regimen details for both moxibustion and drug therapies were reported. Participants in the included studies had osteoarthritis of the knee, scleroma or herpes zoster (shingles).

Two reviewers independently assessed studies for inclusion.

Assessment of study quality

Two reviewers assessed study risk of bias using criteria for sequence generation, missing data, blinding (patient and assessor blinding assessed separately) and allocation concealment. Disagreements between reviewers were resolved by discussion.

Data extraction

Two reviewers independently extracted data required to calculate risk ratios (RRs) with 95% confidence intervals for response rates to moxibustion. Primary authors were contacted where there was insufficient information. It appeared that disagreements were resolved by discussion.

Methods of synthesis

Where appropriate, risk ratios with 95% CIs for response rates were pooled using what appeared to be a random-effects model. Heterogeneity was assessed using X^2 and I^2 tests. Studies not included in the meta-analysis were described narratively.

Results of the review

Four RCTs (n=375, range 60 to 135) were included in the review. All studies had unclear reporting of blinding and allocation concealment. All studies except one had unclear reporting of outcome measures. Only one study adequately described sequence generation. The reviewers reported that only one RCT reported sufficient details of dropouts and withdrawals.

Two RCTs compared indirect moxibustion with conventional drugs and showed a higher response rate in moxibustion groups (RR 1.11, 95% CI 1.02 to 1.21, $I^2=3%$). Two other RCTs used different clinical measures and reported favourable results in moxibustion groups compared with control groups ($p<0.01$ for both RCTs).

Authors' conclusions

There was limited evidence for the effectiveness of moxibustion in the treatment of osteoarthritis of the knee and other pain conditions. There were few RCTs available that tested the effectiveness of moxibustion in the management of pain and most of the existing trials had a high risk of bias.

CRD commentary

This review addressed a clear question with inclusion criteria explicitly specified for study design and intervention. Criteria were more broadly defined for participants and outcomes. Several relevant sources were searched for studies in any language, which reduced potential for language bias. It appeared that no attempts were made to locate unpublished data and so there was potential for publication bias. Details of the included studies were reported in a table. Few details of participants were reported, which made it difficult to assess generalisability to different populations. All the included studies were published in China and the results may not have been generalisable to other settings. A standard and appropriate tool was used to assess risk of bias and results were reported appropriately. Synthesis and data extraction generally appeared appropriate, although a clearer definition of the main outcome (response rate) could have been provided to improve review transparency and repeatability, and the model type used was not clearly stated. All stages of the review were conducted in duplicate, which reduced risks of reviewer error and bias.

As the authors indicated, the review had a number of limitations, such as potential for publication bias and poor methodological quality of the few included qualities, which limited the reliability of the conclusions.

Implications of the review for practice and research

Practice: The authors did not state any implications for practice.

Research: The authors stated that more rigorous trials with large sample sizes and validated outcome measures were required to determine the effectiveness of moxibustion for the treatment of pain. An adequate mock procedure needed to be considered in order to control for non-specific events.

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