Role of acupuncture in the treatment of insomnia: a comprehensive review

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CRD summary
The review concluded that acupuncture may be effective in the treatment of insomnia associated with other psychiatric or medical conditions, but the available evidence was not strong. The authors appropriately considered the limitations in study design and differences across studies. Although the authors' conclusions were cautious, the multiple limitations in review methodology and reporting mean that their reliability is unclear.

Authors' objectives
To evaluate the role of acupuncture in the management of insomnia.

Searching
PubMed, CINHAL, PsycINFO, Cochrane Database of Systematic Reviews, ACP, DARE and Cochrane Controlled Trials Register were searched for English language articles from January 1985 to December 2005. Search terms were reported.

Study selection
Studies evaluating acupuncture for the treatment of insomnia were eligible for inclusion. Interventions in the included studies used either body or scalp acupuncture, auricular acupressure or transcutaneous electrical stimulation and magnetic pearls to stimulate auricular acupoints. Duration and frequency of treatment varied across studies. The age of included participants ranged from 15 to 91 years. Most participants were female. Duration of insomnia ranged from two days to 20 years. Where reported, participants in the included studies were also being treated for neurosis, anxiety, neurasthenia, cerebral trauma or HIV, or they were elderly nursing home residents, pregnant women or were on haemodialysis. Outcomes in the included studies were total sleep hours and sleep quality assessed by a range of measures including self-report, a standardised questionnaire or the use of an actigraph.

The authors did not state how papers were selected for the review.

Assessment of study quality
The authors did not state that they assessed validity.

Data extraction
The authors stated neither how data were extracted for the review nor how many reviewers performed the data extraction.

Methods of synthesis
The studies were combined in a narrative synthesis with an accompanying table.

Results of the review
Nineteen studies (n=1,790) were included in the review: six randomised controlled trials (n=566); four clinical trials (n=284); and nine case series (n=940). Thirteen studies did not report selection criteria for participants.

All 19 studies reported improvements in insomnia after treatment with acupuncture. Twelve studies (n=1,346) which used a subjective assessment of sleep duration as an outcome reported that more than 80 per cent (range 81.25 per cent to 100 per cent) of participants experienced an improvement as a result of the acupuncture. Four studies (n=285) using standardised questionnaires reported significant improvements in sleep time, quality and efficiency. One study (n=120) using wrist actigraph measurements reported significant improvements for nocturnal sleep (p<0.05) and sleep efficiency (p<0.001). A second study (n=21) using wrist actigraph reported both significant improvement in sleep quality (p=0.001) and total sleep time (increasing by an average of two hours per day) following acupuncture. One study (n=18) that used polysomnogram reported improvements in sleep duration (p=0.001) and sleep quality (p=0.002).
Authors' conclusions
Acupuncture may be effective in the treatment of insomnia associated with other psychiatric or medical conditions, however, the available evidence was not strong.

CRD commentary
Inclusion criteria were broadly defined in terms of intervention and outcome, but study design and participants were undefined. Several relevant sources were searched, but no attempts were made to minimise either publication or language bias. Methods used to select studies, assess validity and extract data were not described, so it was not possible to know whether efforts were made to reduce reviewer errors and bias. Study validity was not assessed, so results from these studies and any synthesis may not be reliable. Given the differences between studies a narrative synthesis was appropriate. Although some of the included studies had a control group, no data for control groups or comparisons between treatment and control groups were presented. Results for individual studies were sometimes reported without supporting data or levels of statistical significance, which meant that it was not possible to verify the findings reported in the review. The authors considered the limitations in study design and differences across studies appropriately. Although the authors' conclusions were cautious, the multiple limitations in review methodology and reporting meant that the reliability of the conclusions was unclear.

Implications of the review for practice and research
Practice: The authors stated that patients with insomnia in conjunction with other psychiatric and medical conditions could be referred for acupuncture where other treatment was ineffective.

Research: The authors stated that future well-designed randomised controlled (with use of sham acupuncture) trials with large sample sizes were needed to critically evaluate the potential effects and underlying mechanisms of acupuncture on sleep and sleep disturbances.

Funding
Not stated.

Bibliographic details

PubMedID
17631261

DOI
10.1016/j.ctcp.2007.01.001

Original Paper URL

Indexing Status
Subject indexing assigned by NLM

MeSH
Acupuncture Therapy; Comorbidity; Humans; Sleep Initiation and Maintenance Disorders /psychology /therapy; Treatment Outcome

AccessionNumber
12007009327

Date bibliographic record published
01/09/2008
Date abstract record published
29/07/2009

Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.