TITLE: Acupuncture for Management of Addictions Withdrawal: Clinical Effectiveness

DATE: 09 October 2008

RESEARCH QUESTION:

What is the clinical effectiveness of auricular acupuncture in the management of addictions withdrawal?

METHODS:

A limited literature search was conducted on key health technology assessment resources, including PubMed, the Cochrane Library (Issue 3, 2008), University of York Centre for Reviews and Dissemination (CRD) databases, ECRI, EuroScan, international HTA agencies, and a focused Internet search. Results include articles published between 2003 and September 2008 and are limited to English language publications only. No filters were applied to limit the retrieval by study type. Internet links are provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

RESULTS:

HTIS reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials (RCTs), controlled clinical trials, and observational studies. Additional information that may be of interest has been included in the appendix.

The literature search identified three systematic reviews, three RCTs, and one observational study regarding the use of acupuncture for the management of addictions withdrawal. No health technology assessments or controlled clinical trials were identified.
OVERALL SUMMARY OF FINDINGS:

Three systematic reviews reported on auricular acupuncture. A systematic review conducted by Gates et al. (2006)\(^1\) investigated whether auricular acupuncture was an effective treatment for cocaine dependence and how the treatment regimen influenced the effectiveness. A total of seven RCTs with a total of 1,433 participants were included in the review. The RCTs compared a therapeutic regimen of auricular acupuncture with either sham acupuncture or no treatment for the reduction of cocaine use in cocaine-dependent participants. Separate meta-analyses were conducted on studies comparing auricular acupuncture to sham acupuncture or to no treatment. The authors reported that all of the included studies were of poor methodological quality. No significant differences in cocaine use were noted between auricular acupuncture and sham acupuncture [relative risk (RR) 1.05; 95% CI 0.89-1.23] or between auricular acupuncture and no treatment (RR 1.06; 95% CI 0.90-1.26). The authors concluded that there was no evidence that auricular acupuncture is effective for the treatment of cocaine dependence.

Jordon (2006)\(^2\) conducted a systematic review of the efficacy of treating opiate addiction with acupuncture. Few methodological details were available from the published abstract. The author concluded that the well-designed RCTs and controlled clinical trials included in the systematic review did not provide evidence for acupuncture being an effective treatment for opiate addiction.

A systematic review and meta-analysis by Mill et al. (2005)\(^3\) reviewed the RCTs of acupuncture for the treatment of cocaine addiction. Inclusion criteria were RCTs in which participants were randomized to acupuncture or sham or another control. Trials with participants that had polysubstance use or dependence were excluded. Nine studies with a total of 1,747 participants were reviewed and the data from these studies pooled. Seven of these studies also confirmed cocaine abstinence by biochemical analyses. The pooled odds ratio at the final time point was 0.76 (95% CI, 0.45-1.27). The authors noted that on average, the trials lost approximately 50% of participants that were initially enrolled. The authors concluded that the evidence did not support the use of acupuncture for the treatment of cocaine dependence.

Three RCTs reported on auricular acupuncture. Kunze et al. (2007)\(^4\) conducted a RCT comparing auricular needle acupuncture with aromatherapy in reducing the duration and severity of symptoms of alcohol withdrawal. Participants undergoing alcohol withdrawal were randomly allocated to needle acupuncture (n=55) or aromatherapy (n=54). Thirty-six of the 55 participants in the acupuncture group completed the study and 38/54 participants in the aromatherapy group completed the study. Participants were assessed using the alcohol-withdrawal scale as well as a visual scale of craving. There was no significant difference between groups with regards to the extent of craving or withdrawal symptoms. The authors concluded that acupuncture was not superior over control therapy in its affect on alcohol withdrawal symptoms.

A RCT conducted by Berman et al. (2004)\(^5\) examined the effect of using auricular acupuncture to reduce drug use in a prison setting and to alleviate symptoms of psychological and physical discomfort. The investigators used the National Acupuncture Detoxification Association (NADA)-Acudetox protocol and compared its use with a non-specific auricular protocol. Methodological details including the number of participants and gender in each group were not provided in the abstract. Participants underwent 14 sessions of acupuncture over the course of four weeks. No significant differences were noted between groups in terms of self-reported symptoms of discomfort although both groups experienced reduced symptoms of discomfort and improved sleep during the night. Drug use occurred in the NADA-Acudetox group, but not in the control...
acupuncture group. The authors concluded that further research that compared NADA-Acudetox to a non-invasive control was needed to distinguish acupuncture-specific effects from placebo.

Trumpler et al. (2003)\(^6\) performed a RCT comparing auricular laser and needle acupuncture with sham laser stimulation in reducing the duration of alcohol withdrawal. Inpatients undergoing alcohol withdrawal were randomly assigned to laser acupuncture (n=17), needle acupuncture (n=15), or sham laser stimulation (n=16). The authors noted that although attempts were made to blind patients and those involved in the study to which type of stimulation was performed, this was not possible in the case of the needle acupuncture group. Withdrawal symptoms were assessed using a nurse-rated scale. The authors found that participants receiving either auricular laser or sham laser had identical withdrawal symptom durations with a median of four days. Participants receiving auricular needle acupuncture had a shorter duration of withdrawal symptoms with a median of three days (p=0.019; versus sham laser treatment). The authors concluded that the results from this pilot trial do not suggest a benefit of auricular laser acupuncture for alcohol withdrawal. They also suggested that a larger trial including the appropriate sham interventions was needed to determine the effectiveness of either laser or needle auricular acupuncture on alcohol withdrawal.

One observational study investigated the use of acupuncture for the treatment of substance abuse (Janssen et al., 2005).\(^7\) In this study, acupuncture was offered on a voluntary basis, five days per week in a community centre. Over the three month study period, there were 2,755 visits. Participants noted a reduction in overall use of substances (p=0.01) as well as a decrease in withdrawal symptoms including shaking, stomach cramps, hallucinations, insomnia, muscle aches, nausea, sweating, heart palpations, and feeling of suicide (p<0.05). The authors concluded that acupuncture was promising adjunct therapy for the reduction of substance abuse.

In summary, three systematic reviews and two RCTs suggested that the available evidence did not support the use of acupuncture for the treatment of substance abuse. Two of the systematic reviews investigated cocaine addiction\(^1,3\) and one examined opiate addiction\(^2\). Two of the three RCTs concluded that acupuncture was not effective at reducing alcohol withdrawal.\(^4,5\) One RCT reported a shorter duration of withdrawal symptoms in participants receiving auricular needle acupuncture; however, this treatment was compared to a non-acupuncture (laser) stimulation.\(^6\) One observational study that treated participants using substances of abuse with acupuncture reported that acupuncture was a promising adjunct therapy for reducing abuse.\(^7\) Overall, the studies suggest that there is insufficient evidence for the use of auricular acupuncture for addictions withdrawal.
REFERENCES SUMMARIZED:

Health technology assessments
No literature identified.

Systematic reviews and meta-analyses


Randomized controlled trials


Controlled clinical trials
No literature identified.

Observational studies


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APPENDIX – FURTHER INFORMATION:

Review articles


Additional references