Acupuncture in xerostomia: a systematic review

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CRD summary
This review assessed the efficacy of acupuncture for xerostomia. The author concluded that there was no evidence supporting the efficacy of acupuncture and that further research is required. The review's findings tended to support the author's conclusions, but the poor reporting of the review methods and the limited search mean that the reliability of the conclusions is uncertain.

Authors' objectives
To assess the efficacy of acupuncture for the treatment of xerostomia.

Searching
MEDLINE and the Cochrane CENTRAL Register were searched to September 2003 for studies published in English in peer-reviewed journals; the search terms were reported. The reference lists of all included studies were screened.

Study selection
Study designs of evaluations included in the review
Controlled clinical trials (CCTs) were eligible for inclusion.

Specific interventions included in the review
Studies of acupuncture were eligible, regardless of the method of stimulation. Studies of treatments that did not use needling were excluded. The included studies compared manual acupuncture with and without electrical stimulation to superficial needling or waiting-list control. The studies used acupuncture according to Chinese medicine or according to a Western diagnosis. Treatments were given for 20 to 30 minutes, twice or thrice weekly, for 6 or 10 weeks.

Participants included in the review
Studies of adults with xerostomia were eligible for inclusion. The participants in the included studies were aged between 33 and 82 years. Their xerostomia had been induced by radiation or was due to primary Sjogren's syndrome or various unspecified causes.

Outcomes assessed in the review
Inclusion criteria were not specified in terms of the outcomes. In all of the included studies, the primary outcome was resting and stimulated salivary flow rate. One study also assessed subjective symptoms (burning and sensation in the mouth) and mouth and eye dryness. The review also assessed adverse effects.

How were decisions on the relevance of primary studies made?
The studies were screened for inclusion in two phases: first, the abstracts were read to remove clearly irrelevant studies; second, the complete articles were retrieved and screened against the inclusion criteria. The author did not state how many reviewers performed the selection.

Assessment of study quality
Validity was assessed and scored using the Jadad scale, which considers the reporting and handling of randomisation, blinding and the handling of withdrawals. The maximum possible score was 5 points. Studies scoring 3 or more were considered to be of a high quality. The author did not state who performed the validity assessment.

Data extraction
The author did not state how the data were extracted for the review, or how many reviewers performed the data
extraction. For each study, the outcomes were classified as positive or negative where acupuncture was significantly better or worse than the control for at least one outcome. Otherwise, the results were classified as indifferent.

Methods of synthesis  
How were the studies combined?  
The studies were combined in a narrative.

How were differences between studies investigated?  
The results were discussed with respect to study quality. Other differences between the studies were apparent from the tables.

Results of the review  
Three CCTs (n=79) were included.

One study scored 3 out of 5 on the quality scale and was classified as high quality. The other two studies scored 2 points and were classified as low quality.

In terms of efficacy, the high-quality study found indifferent results. One of the low-quality studies found positive results and the other found indifferent results.

Two studies reported adverse effects after acupuncture. These included tiredness and small haemorrhages at the treatment sites. The other study did not report any adverse effects.

Authors' conclusions  
There was no evidence supporting the efficacy of acupuncture for xerostomia. Further research is required.

CRD commentary  
The review addressed a clear question that was defined in terms of the participants, intervention and study design. Limiting included studies to those published in English in two databases raises the possibility of publication and language bias. The author also acknowledged the possibility of having omitted relevant studies. Since the methods used to select studies, assess validity and extract the data were not described in full, it is not known whether any efforts were made to reduce reviewer errors and bias. Study quality was assessed but the scale used was designed for randomised controlled trials (RCTs) and might not have been appropriate had any of the included studies been CCTs (CCTs were eligible). It was not explicitly stated whether any of the included studies were RCTs and the validity of the methods used to measure outcomes was not discussed.

Given the small number of studies showing mixed results, a narrative synthesis that took account of study quality was appropriate. The lack of complete reporting of review methods (as well as a limited search) mean that the reliability of the author's conclusions is uncertain. The recommendations for further research appear appropriate given the small number of studies identified.

Implications of the review for practice and research  
Practice: The author did not state any implications for practice.

Research: The author stated the need for high-quality RCTs.

Bibliographic details  

PubMedID
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.