Acupuncture for dysphagia following stroke: a systematic review

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CRD summary
This review found that use of acupuncture together with conventional stroke rehabilitation appeared to have a beneficial effect on dysphagia but that concerns over the methodological quality of the included trials meant no conclusive conclusion could be drawn. The results of this review cannot be considered reliable so this cautious conclusion is appropriate.

Authors' objectives
To investigate the efficacy of acupuncture for treating dysphagia during stroke rehabilitation.

Searching
MEDLINE, EMBASE, CINAHL, The Cochrane Library and CNKI were searched from 1966 to February 2011 for articles in English or Chinese. Some search terms were presented. Two Chinese acupuncture journals were handsearched.

Study selection
Randomised controlled trials (RCTs) that compared any type of acupuncture to no acupuncture in patients with clinically diagnosed ischaemic or haemorrhagic stroke were eligible for inclusion. Patients had to have been diagnosed with dysphagia using bedside swallowing assessment, VFSS (video fluoroscopic swallowing study) or FEES (fibre-optic endoscopic examination of swallowing). Studies were excluded if they: performed acupuncture without needles; compared different types of needling; included patients with dementia, other cognitive or mental disorder or pulmonary infection; were deemed to be of low quality; or were not published as full papers.

The outcomes considered were bedside swallowing assessment, VFSS, FEES, quality of life and adverse events. Patients were generally aged between 40 and 82. The intervention took place between one week and six months after the stroke and patients were generally in the acute or subacute stages of recovery. Most patients received feeding and swallowing rehabilitation training but some received only conventional treatment or medication. The treatment period lasted from 24 to 30 days. Treatment frequency varied.

It appeared that two reviewers independently assessed studies for inclusion.

Assessment of study quality
Trial quality was assessed using both the PEDro and Cochrane risk of bias tools.

Two reviewers independently assessed quality and disagreements resolved by discussion.

Data extraction
Details of the data extraction process were not presented. It appeared that the effectiveness of acupuncture on the various outcomes was extracted in terms of p-values.

It appeared that two reviewers independently performed data extraction.

Methods of synthesis
No formal meta-analysis or synthesis was performed. The results from each trial were briefly summarised in a table and a narrative commentary on overall effectiveness was presented.

Results of the review
Nine trials were included about 850 patients (range 60 to 229). Seven studies were considered to be good quality (PEDro score 6 to 8 out of 10) and two fair quality (score 4 or 5). None of the trials blinded patients or therapists and only two blinded outcome assessors.
All trials showed a statistically significant (p<0.05) benefit of acupuncture on all outcome measures. The results suggested that acupuncture with conventional stroke rehabilitation or electro-acupuncture alone were more effective at improving dysphagia than conventional stroke rehabilitation. No adverse events were reported.

Authors’ conclusions
Use of acupuncture together with conventional stroke rehabilitation appeared to have a beneficial effect on dysphagia but concerns over the methodological quality of the included trials mean no conclusive conclusion can be drawn.

CRD commentary
This review addressed a valid research question with appropriate inclusion criteria. The search was broad but it was limited to published articles in English or Chinese so some relevant studies may have been missed. It seemed that appropriate action was taken to reduce reviewer error and bias. Trial quality was assessed and found to be fair to good but the authors noted several problems in this area including limited description of randomisation methods and lack of blinding that could have led to biased results. The included trials were all small in size. The authors noted that the gold standard method of assessing swallowing was used in only two trials. No formal meta-analysis or synthesis of the trials was presented and limited results were presented for each trial which made it difficult to interpret the validity of the results and the authors’ conclusions. The results of this review cannot be considered to be reliable.

The authors’ cautious conclusions and recommendation for further research are appropriate.

Implications of the review for practice and research
Practice: The authors suggested that acupuncture may be used in this area given its relative safety.

Research: The authors suggested that a large-sample properly blinded trial was needed in this area.

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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.