Acupuncture for Acute Stroke
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Acupuncture is widely used in the treatment of stroke in China and it is increasingly requested by patients in some Western countries. Experimental data indicate that acupuncture-like sensory stimulation activates multiple efferent (nerve) pathways leading to altered activity in numerous neural systems.

Objectives
The objectives of this study were to assess the effectiveness and safety of acupuncture in patients with acute stroke.

Search Strategy
We searched the Cochrane Stroke Group Trials Register (last searched August 2003), the Chinese Stroke Trials Register (August 2003), and the Chinese Acupuncture Trials Register (August 2003). Electronic searches were performed in the Cochrane Controlled Trials Register (The Cochrane Library, Issue 3, 2003), MEDLINE (1966 to 2003), EMBASE (1980 to 2003), Alternative Medicine Database (1985 to 2003), CINAHL (1982 to 2003), and the Chinese Biological Medicine Database (1981 to 2003). Reference lists of systematic reviews and identified trials were handsearched.

Selection Criteria
Randomized and quasirandomized trials of acupuncture started within 30 days of stroke onset compared with placebo/sham acupuncture or open control in patients with acute ischemic and/or hemorrhagic stroke. Needling into skin was required for acupuncture.

Data Collection and Analysis
Two reviewers selected trials for inclusion, assessed trial quality, and extracted data independently. Authors of trials were contacted for missing data. Heterogeneity between trial results was tested using a standard χ² test.

Main Results
Fourteen trials involving 1208 patients were included. Three trials were of high quality regarding method of randomization, concealment of allocation, blinding, and intention-to-treat analysis. Ten trials included patients with only ischemic stroke. When acupuncture was compared with sham acupuncture or open control, there was a borderline significant trend toward fewer patients being dead or dependent (odds ratio [OR] 0.66, 95% confidence interval [CI] 0.43 to 0.99; Figure), and significantly fewer being dead or needing institutional care (OR 0.58, 95% CI 0.35 to 0.96) in the acupuncture group after 3 months or more. There was also a significant difference favoring acupuncture in the mean...
change of global neurologic deficit score during the treatment period (standardized mean difference [SMD] 1.17, 95% CI 0.30 to 2.04). Comparison of acupuncture with sham acupuncture only showed a statistically significant difference on death or requiring institutional care (OR 0.49, 95% CI 0.25 to 0.96), but not on death or dependency (OR 0.67, 95% CI 0.40 to 1.12), or change of global neurologic deficit score (SMD 0.01, 95% CI −0.55 to 0.57). Severe adverse events with acupuncture (dizziness, intolerable pain, and infection of acupoints) were rare (6 of 386, 1.55%).

Implications for Practice
Acupuncture appeared to be safe. The number of patients is too small to be certain whether acupuncture is effective for treatment of acute ischemic or hemorrhagic stroke. The current evidence does not support the routine use of acupuncture for patients with acute stroke.

Implications for Research
Because acupuncture appears potentially effective and safe in the treatment of acute ischemic stroke, further well-designed trials are required to confirm or refute this. There is also a need to conduct more randomized, controlled trials of acupuncture in hemorrhagic stroke. Future trials should overcome the limitations of many of the trials presented in this review. In particular, they should ensure adequate concealment of allocation and blinding of outcome assessors, use an objective dichotomous functional outcome as a primary outcome, have long-term follow up, and publish the results in a usable form to facilitate a metaanalysis.


KEY WORDS: acupuncture / acute stroke / metaanalysis
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