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Acupuncture for Acute Stroke

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Sensory stimulation via acupuncture has been reported to alter activities of numerous neural systems by activating multiple efferent pathways. Acupuncture has been widely used to treat patients with stroke for over hundreds of years. This is the first update of the Cochrane Review originally published in 2005.

Objectives

We aimed to assess whether acupuncture could reduce the proportion of people with death or dependency after acute ischemic or hemorrhagic stroke.

Methods

We searched the Cochrane Stroke Group trials register, CENTRAL, MEDLINE, Embase, and 4 additional databases, as well as trial registries up to February 2017. We included randomized clinical trials of acupuncture started within 30 days from stroke onset compared with placebo or sham acupuncture or open control (no placebo) in people with acute ischemic or hemorrhagic stroke or both. Needling into the skin was required for acupuncture. The primary outcome was defined as death or dependency at the end of follow-up.

Main Results

We included in this updated review 33 randomized clinical trials with 3946 participants. Twenty new trials with 2780 participants had been completed since the previous review. Outcome data were available for only 6 trials (668 participants) that compared acupuncture with sham acupuncture control. When compared with any control (11 trials with 1582 participants), findings of lower odds of death or dependency at the end of follow-up and during the long term (≥3 months) in the acupuncture group were uncertain (odds ratio, 0.61; 95% confidence interval [CI], 0.46–0.79; very low-quality evidence; and odds ratio, 0.67; 95% CI, 0.53–0.85; 8 trials with 1436 participants; very low-quality evidence, respectively) and were not confirmed by trials comparing acupuncture with sham acupuncture alone (odds ratio, 0.71; 95% CI, 0.43–1.18; low-quality evidence; and odds ratio, 0.67; 95% CI, 0.40–1.12; low-quality evidence, respectively; Figure). Secondary outcomes: in trials comparing acupuncture with any control, finding that acupuncture was associated with increases in the global neurological deficit score and in the motor function score was uncertain (standardized mean difference, 0.84; 95% CI, 0.36–1.32; 12 trials with 1086 participants; very low-quality evidence; and standardized mean difference, 1.08; 95% CI, 0.45–1.71; 11 trials with 895 participants; very low-quality evidence). These findings were also not confirmed in trials comparing acupuncture with sham acupuncture (standardized mean difference, 0.01; 95% CI, −0.55 to 0.57; low-quality evidence; and standardized mean difference, 0.10; 95% CI, −0.38 to 0.17; low-quality evidence, respectively). Trials comparing acupuncture with any control have reported little or no difference in death or institutional care at the end of follow-up, death within the first 2 weeks, or death at the end of follow-up. The incidence of adverse events in the acupuncture arms of open and sham control trials was 6.2% (64/1037 participants), and 1.4% of these (14/1037 participants) discontinued acupuncture. No significant difference was noted in the proportion of participants with adverse events in trials comparing acupuncture with sham acupuncture.

Implications for Practice

In this review, the apparent reduction in dependency and improvement in neurological recovery with acupuncture in acute stroke are confounded by risk of bias related to use of open controls. Adverse events with acupuncture were generally reported to be minor and usually did not result in stopping treatment.

Implications for Research

Future studies are needed to confirm or refute any effects of acupuncture in acute stroke. Trials should clearly report the method of randomization, concealment of allocation, and whether blinding of participants, personnel, and outcome assessors was achieved, while paying close attention to the effects of acupuncture on long-term functional outcomes.

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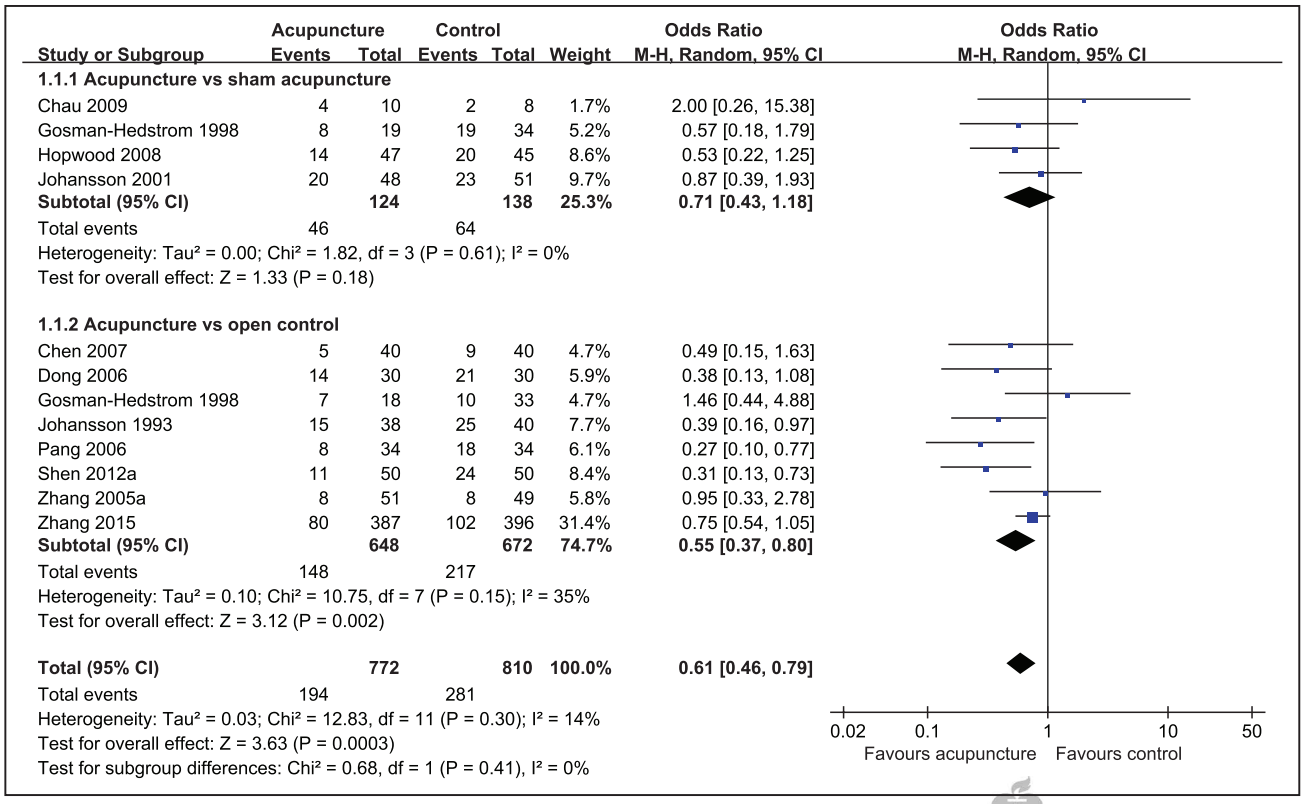

Figure. Forest plot of death or dependency at the end of follow-up. CI indicates confidence interval.

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None.

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