Puerarin for Acute Ischemic Stroke

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Puerarin, a form of herbal medicine, is widely used in the treatment of acute ischemic stroke in China, but its efficacy is uncertain.

Objectives
The objective of this review was to assess the efficacy and safety of puerarin in patients with acute ischemic stroke. The primary objective was to determine whether puerarin improves functional outcome without causing undue harm in patients with acute ischemic stroke. The secondary objective was to assess the adverse events and quality of life.

Search Strategy
We searched the Cochrane Stroke Group Trials Register (last searched August 2006), the Trials Register of the Cochrane Complementary Medicine Field (last searched June 2006), and the Chinese Stroke Trials Register (last searched June 2006). In addition, we searched the Cochrane Central Register of Controlled Trials (CENTRAL; The Cochrane Library Issue 1, 2006), MEDLINE (1966 to August 2006), EMBASE (1980 to June 2006), AMED (1985 to June 2006), and the China Biological Medicine Database (CBM-disc, 1979 to June 2006). We searched reference lists, relevant clinical trials, and research registers and contacted pharmaceutical companies and researchers in an effort to identify further published and unpublished studies.

Selection Criteria
Selection criteria comprised randomized, controlled trials or quasirandomized, controlled clinical trials comparing puerarin with placebo or open control (no placebo) in patients with acute ischemic stroke.

Data Collection and Analysis
Two reviewers independently applied the inclusion criteria, assessed trial quality, and extracted the data.

Main Results
Only one trial involving 98 patients was included. The methodological quality of the trial was poor. The trial did not report the method of randomization and blinding. The trial performed an intention-to-treat analysis that considered patients lost to follow-up to have died. The outcome measures used were death or dependency (Barthel index <60) and neurological deficit using the Scandinavian Stroke Scale. The duration of follow-up was 6 months. Seven patients (7.1%) were lost to follow-up, 3 of whom were in the treatment group and 4 of whom were in the control group. No significant difference in death or dependency at the end of the scheduled follow-up period was shown between the treatment and control groups (OR, 0.81; 95% CI, 0.35 to 1.87). No serious adverse effects were reported. There was no significant difference in death from any cause at final follow-up (8.3%, 8.0%, \( P > 0.05 \)). Assessments of quality of life were not undertaken.

Implications for Practice
The only randomized, controlled unconfounded study on the application of puerarin in acute stroke had a small number of patients included. CT was either not performed or not reported, and randomization may not have been secure. Based on this study, the routine administration of puerarin for all patients with acute ischemic stroke is not recommended until its effects are tested in larger randomized, controlled trials.

Implications for Research
According to the present standards of clinical research, the clinical efficacy of puerarin in acute stroke has not yet been properly evaluated. Based on in vitro studies and animal experiments, puerarin has effects that might be beneficial in acute stroke. To prove this hypothesis, placebo-controlled unconfounded, properly randomized clinical studies have to be designed and performed. In these studies, the adequate concealment of allocation, blinding of outcome assessors, and reliable outcome measures should be assured.

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None.

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