Naftidrofuryl for Acute Stroke

Jo Leonardi-Bee, PhD; Timothy Steiner, MD, PhD; Fiona Bath-Hextall, PhD

Stroke is the third most common cause of death and the most common cause of disability in the western world. The development of drugs to limit the brain damage caused by stroke, or the effects of such damage, continues but no routinely effective treatment has yet been identified. Naftidrofuryl has been reported to be beneficial in the treatment of acute stroke in some studies, but it is unclear whether all of the evidence supports these findings. Consequently, the use of naftidrofuryl in acute stroke varies widely. It is used in some developing countries but has been removed from the market for use in acute stroke in the UK.

Objective

The objective of this study was to perform a systematic review of randomized controlled clinical trials to assess whether Naftidrofuryl in the acute phase of stroke (defined as within 7 days after ictus) can alter the risks of early death, late death, or disability.

Materials and Methods

We searched the Cochrane Stroke Group Trials Register (last searched November 2006), the Cochrane Central Register of Controlled Trials (CENTRAL), the Cochrane Database of Systematic Reviews, and the Database of Abstracts of Reviews of Effects (The Cochrane Library Issue 2, 2006); MEDLINE (1966 to July 2006); EMBASE (1980 to July 2006); Science Citation Index (1981 to July 2006); National Research Register (July 2006); LILACS Database (1982 to July 2006); metaRegister of Controlled Trials (mRCT) (July 2006); and SUMsearch (July 2006). To identify further published, unpublished, or ongoing studies we searched reference lists, manually searched conference proceedings, and contacted pharmaceutical companies and authors of relevant articles.

We included all randomized controlled trials that compared the effect of Naftidrofuryl with that of placebo in patients with acute ischemic or hemorrhagic stroke clinically diagnosed by a medical practitioner with or without a CT scan. Two authors independently selected trials for inclusion, assessed trial quality, and extracted data using data extraction forms or, if available, re-analyzed individual patient data. Random effect models were used in the meta-analyses.

Main Results

Six trials involving 1274 participants were included. We found no significant benefits of Naftidrofuryl compared with placebo in reducing the risks of mortality (pooled OR, 1.03; 95% CI, 0.78 to 1.36; 6 studies;
Figure) or of combined death or dependency/disability (pooled OR, 0.94; 95% CI, 0.70 to 1.16; 3 studies). Pooled results showed Naftidrofuryl had no significant effect on systolic, diastolic, or mean arterial blood pressures. No trials reported the effects of Naftidrofuryl on the risks of early death or deterioration, quality of life, stroke recurrence, or discharge site. However, we found a trend toward an increase in risk of minor adverse events in patients taking Naftidrofuryl (OR, 1.99; 95% CI, 0.96 to 4.11; \( P = 0.06 \)).

**Conclusions**

**Implications for Practice**

From this systematic review, there is little evidence to suggest that Naftidrofuryl affects outcome after acute stroke.

**Implications for Research**

Although only 6 randomized controlled trials were identified in this review, there is little evidence to support the conduct of further studies using Naftidrofuryl in the treatment of acute stroke.

Note: The full text of this review should be cited as: Leonardi-Bee J, Steiner T, Bath-Hextall FJ. Naftidrofuryl for acute stroke. *The Cochrane Database of Systematic Reviews*. 2007, Issue 2.

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**Disclosures**

Tim Steiner was the chief principal investigator for 2 of the trials included in the review. All the analyses and their interpretation reflect the opinions of the authors. No pharmaceutical company was involved in the analysis or interpretation of data, or in the writing of this review.
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