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Cerebrolysin for acute ischaemic stroke

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Abstract

BACKGROUND: Cerebrolysin is a mixture of low-molecular-weight peptides and amino acids derived from pigs' brain tissue, which has potential neuroprotective and neurotrophic properties. It is widely used in the treatment of acute ischaemic stroke in Russia, China, and other Asian and post-Soviet countries. OBJECTIVES: To assess the benefits and risks of Cerebrolysin for treating acute ischaemic stroke. SEARCH METHODS: We searched the Cochrane Stroke Group Trials Register (October 2014), the Cochrane Central Register of Controlled Trials (CENTRAL) (November 2014), MEDLINE (1966 to November 2014), EMBASE (1974 to November 2014), Web of Science Core Collection, with Science Citation Index (1940 to November 2014), LILACS (1982 to December 2014), OpenGrey (1980 to December 2014), and a number of Russian Databases (1998 to December 2014). We also searched reference lists, ongoing trials registers and conference proceedings, and contacted the manufacturer of Cerebrolysin, EVER Neuro Pharma GmbH (formerly Ebewe Pharma). SELECTION CRITERIA: Randomised controlled trials comparing Cerebrolysin started within 48 hours of stroke onset and continued for at least two weeks with placebo or no treatment in people with acute ischaemic stroke. DATA COLLECTION AND ANALYSIS: Two review authors independently applied inclusion criteria, assessed trial quality and risk of bias, and extracted data. MAIN RESULTS: We included one trial involving 146 participants. We evaluated risk of bias and judged it to be high for generation of allocation sequence, low for allocation concealment, high for incomplete outcome data (attrition bias), unclear for blinding, high for selective reporting and high for other sources of bias. The manufacturer of Cerebrolysin, pharmaceutical company Ebewe, provided Cerebrolysin and the placebo, as well as the randomisation codes. There was no difference in the number of deaths (6/78 in Cerebrolysin group versus 6/68 in placebo group; risk ratio (RR) 0.87, 95% confidence interval (CI) 0.29 to 2.58) or in the total number of adverse events (16.4% versus 10.3%; RR 1.62, 95% CI 0.69 to 3.82) between the treatment and control groups. AUTHORS' CONCLUSIONS: Routine administration of Cerebrolysin to people with acute ischaemic stroke cannot be supported by the available evidence from RCTs.

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