INPLASY PROTOCOL

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None.

Curative effect and safety of sodium nitroprusside or combined Ginkgodamole and nitroglycerin on hypertensive cerebropathia : a meta-analysis

Peng, L[1]; Zhao, WK[2]; Xu, TT[3]; Wu, Q[4]; Lu, P[5]; Zhu, PP[6]; Zheng, XM[7].

Review question / Objective: **P: Patients diagnosed with hypertensive encephalopathy I: The observation group was treated with combined ginkodamole and nitroglycerin. C: The control group was treated with sodium nitroprusside. O: At least one of the following items, total effect, level of blood pressure and incidence of adverse response was included. S: RCT.**

Condition being studied: **Literatures concerning were searched in the following seven electronic databases, Cochrane, PubMed, Excerpta Medica Database (Embase), China National Knowledge Infrastructure (CNKI), Wanfang, Value In Pape (VIP), and China Biology Medicine (CBM). Registered clinical trials were searched in website of the National Institutes of Health of America (http://clinicaltrials.gov/), China Clinical Trials Registration Center (http://www.chictr.org/) and International Clinical Trials Registration Center.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 20 July 2020 and was last updated on 20 July 2020 (registration number INPLASY202070092).

INTRODUCTION

Review question / Objective: **P: Patients diagnosed with hypertensive encephalopathy I: The observation group was treated with combined ginkodamole and nitroglycerin. C: The control group was treated with sodium nitroprusside. O: At least one of the following items, total**

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METHODS

Participant or population: Patients diagnosed with hypertensive encephalopathy. 1507

Intervention: The observation group was treated with combined ginkodamole and nitroglycerin.

Comparator: The control group was treated with sodium nitroprusside.

Study designs to be included: RCT.

Eligibility criteria: Patients diagnosed with hypertensive encephalopathy.

Information sources: Cochrane, PubMed, Excerpta Medica Database (Embase), China National Knowledge Infrastructure (CNKI), Wanfang, Value In Pape (VIP), and China Biology Medicine (CBM). Registered clinical trials were searched in website of the National Institutes of Health of America (http://clinicaltrials.gov/), China Clinical Trials Registration Center (http://www.chictr.org/) and International Clinical Trials Registration Center.

Main outcome(s): A total of sixteen RCTs including 1507 patients with hypertensive cerebrophia were included in the present meta-analysis, of which, 755 patients treated with combined ginkodamole and nitroglycerin were included in the observation group, and 752 patients treated with sodium nitroprusside were included in the control group. The curative effect of the observation group was better than the control group, and the results had statistic significance (RR:1.115[1.077, 1.155)], p0.05). SBPs of the observation group were reduced significantly as compared to the control group, and there was statistic significance (MD:-2.842[–5.222, -0.462], p0.05).

Quality assessment / Risk of bias analysis: Quality of the methodology was assessed using the Cochrane standard[8]. This assessment included the following methods, sequence generation, allocation concealment, blinding, imcomplete outcome data, selective outcome reporting, and other sources of bias. The risk of every method was assessed, and the risk assessment table was prepared using the Revman 5.3 software.

Strategy of data synthesis: Data were analyzed using the software RevMan5.3 and Stata12.0. Binary outcome datas were expressed as risk ratio (RR). Consecutive variables were expressed as mean value ± standard deviation (SD) and a 95% confidence interval. Chi-square test and I2 test were used to test heterogeneity. p>0.1 and I20.05 represented the inexistence of publication bias. If the number of RCTs included was not enough, a sensitivity test was used to test the stability of the results of meta-analysis.

Subgroup analysis: The subjects of observation group and control group are patients with hypertensive encephalopathy. The intervention measures of the observation group were ginkgo damol combined with nitroglycerin. The intervention of the control group was sodium nitroprusside.

Sensibility analysis: After sensitivity analysis, no change in heterogeneity.

Country(ies) involved: China.

Keywords: Ginkgodamole; nitroglycerin; sodium nitroprusside; hypertensive cerebropathia; meta-analysis.

Contributions of each author:

Author 1 - Li Peng - performed the data extraction, analysis, and interpretation and wrote the initial draft.
Author 2 - Wei-kun Zhao - performed the data extraction, analysis, and interpretation and wrote the initial draft.
Author 3 - Tongtong Xu - conceived and designed this study.
Author 4 - Qi Wu - performed the data extraction, analysis, and interpretation and wrote the initial draft.
Author 5 - Pan Lu - assisted with data interpretation.
Author 6 - Pan-pan Zhu - assisted with data interpretation.
Author 7 - Xiao-ming Zheng - assisted with data interpretation.