SO016 / #1303

OPPORTUNITIES FOR CEREBROPROTECTIVE THERAPY OF PATIENTS IN THE ACUTE AND EARLY RECOVERY PERIOD OF ISCHEMIC STROKE

SHORT COMMUNICATIONS 01: HYPERACUTE STROKE TREATMENT INCLUDING PREHOSPITAL CARE AND STROKE SERVICES

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Background and Aims: Cerebroprotection requires focus on multi-target agents that interrupt ischemia at multiple steps. We studied the efficacy of coordination complex with succinate acid anion (CCSA) as a potential multi-target agent, (Brainmax®) in comparison with ethylmethylhydroxypyridine succinate (EMHPS) and trimethylhydrazinium propionate (TMHP) for patients with ischemic stroke in the acute and early recovery period.
Methods: The study employed an open multicenter randomized trial approach. The study included 180 patients (mean age 60.91±7.66 years, NIHSS from 3 to 15 points). Patients were randomized to receive CCSA, EMHPS and TMHP in an equal ratio (n=60). The drugs were administered intravenously for 10 days, followed by a transition to intramuscular injection for 14 days. All patients were examined: mRS, NIHSS, Rivermead Mobility Index (RMI), MoCA on the 1st, the 10th and the 25th day of the study.
Results: The mean mRS score at day 10 and 25 for the group treated with CCSA was 2.41±0.85 and 1.44±0.91 points, for the group EMHPS – 2.87±0.68 and 2.18±0.85 points, and for the TMCP group – 2.87±0.50 and 2.55±0.70 points respectively, which reflects the best functional outcome in the CCSA group ($p<0.05$). Patients receiving CCSA showed a 2-fold decrease in neurological deficit according to NIHSS and an increase in mobility according to mRS by 15% compared to monotherapy by the 25th day of treatment ($p<0.05$). Restoration of cognitive functions was 20% more effective in the CCSA group compared to single drugs.
Conclusions: The present study confirms the superiority of many targeted CCSAs over single agents.

SO017 / #1821

DIRECT ANTICOAGULANTS DO NOT INCREASE THE RISK OF HEMORRHAGIC COMPLICATIONS AFTER TREATMENT OF ACUTE ISCHEMIC STROKE

SHORT COMMUNICATIONS 01: HYPERACUTE STROKE TREATMENT INCLUDING PREHOSPITAL CARE AND STROKE SERVICES

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Background and Aims: Ten percent of ischaemic strokes (IS) occur while patients are orally anticoagulated (OAC). Anticoagulation may increase the risk of hemorrhagic complications with and without thrombolysis but prospective data are limited. We performed a prospective, multicenter registry to evaluate the clinical course and management of IS in anticoagulated vs non-anticoagulated patients and tested the exemplary hypothesis that DOAC are non-inferiuor to no-OAC in terms of symptomatic haemorrhage.
Methods: RASUNOA-Prime (NCT02533960) enrolled consecutive AF patients who developed IS while treated with a direct OAC (DOAC), a vitamin-K-antagonist (VKA) or no anticoagulant (no-OAC). Neuroimaging was reviewed centrally blinded to group allocation. Primary endpoint was symptomatic intracerebral hemorrhage. Exploratory analysis of degree of hemorrhagic transformation (HT) was performed including adjustment for thrombolysis at baseline and during follow-up.
Results: 5733 patients were screened,2737 were enrolled. In 1833 (67%) a follow-up scan was available. Median NIHSS score and infarct size were smaller in patients receiving DOACs. At baseline, the proportion of patients with HT did not differ among groups. At follow-up, symptomatic hemorrhage occurred in only 0.6% of patients without any evident negative effect of DOAC (non-inferiority $p < 0.0015$). Patients on DOAC received less frequently (47.0 vs. 7.4%) thrombolysis and with considerable delay (median: 19 min). Exploratory analysis showed no effect of DOAC on severity of HT after thrombolysis.
Conclusions: DOACs do not increase the risk of symptomatic hemorrhage or HT after IS but frequently preclude or delay thrombolysis in clinical routine. This questions whether thrombolysis should be withheld in IS patients on DOAC who are otherwise suitable candidates.

SO018 / #2695

GOLDEN HOUR INTRAVENOUS THROMBOLYSIS FOR ACUTE ISCHEMIC STROKE: A SYSTEMATIC REVIEW AND META-ANALYSIS

SHORT COMMUNICATIONS 01: HYPERACUTE STROKE TREATMENT INCLUDING PREHOSPITAL CARE AND STROKE SERVICES

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Background and Aims: The benefits of intravenous thrombolysis are time-dependent, with maximum efficacy when administered within the first "golden" hour after onset. Nevertheless, the impact of golden hour thrombolysis has not been well quantified.
Methods: Medline, Embase, and Web of Science databases were systematically searched from inception to August 27, 2023. We included studies reported safety and efficacy outcomes of ischemic stroke patients treated with intravenous thrombolysis in the golden hour vs later treatment window. The primary outcome was an excellent functional outcome, defined as modified Rankin scale (mRS) of 0-1 at 90 days. The secondary efficacy outcome was the good functional outcome (defined as mRS of 0-2). The main safety outcome was symptomatic intracerebral hemorrhage (sICH).
Results: Seven studies involving 78,826 patients met selection criteria. Golden hour thrombolysis was associated with higher odds of 90-days excellent functional outcomes (OR, 1.40 [95% CI, 1.16-1.67]) and 90-days good functional outcomes (OR, 1.38 [95% CI, 1.13-1.69]) compared to thrombolysis outside the golden hour. The number needed to treat to benefit for golden hour thrombolysis to reduce disability by at least one level on mRS per patient was 2.6. Rates of sICH and mortality were similar between groups.