Cerebrovascular Diseases

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Abstracts

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Conflict of Interest Statement

The abstracts included in this supplement were reviewed and selected by the International Scientific Committee and Abstract Reviewers. The committee has no conflicts of interest in connection with the congress and the selection of abstracts.

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IV Thrombolysis

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AB000176

Multicenter Experience Of Using Fortelysin During Staged Reperfusion Therapy Of Acute Ischemic Stroke In Anterior Circulation

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Objective: To present the first results of the FORTA RF multicenter study on the safety and efficacy of Fortelyzin in the staged reperfusion therapy of acute ischemic stroke in anterior circulation.

Methods: The study included 72 patients with acute ischemic stroke in anterior circulation, who underwent staged reperfusion therapy in four vascular centers of the Russian Federation from December 2019 to January 2023.

Results: The mean time from illness onset to hospitalization was 94,5 minutes in the Fortelyzin group and 97,2 minutes in the Actilyse group (P=0,78). The time from the moment of hospitalization to the admission of the patient to the X-ray operating room was significantly lower in the Fortelyzin group (P=0,002). The incidence of symptomatic hemorrhagic transformations in the Fortelyzin group was 14%, in the Actilyse group - 22% (P=0,38). A favorable functional outcome in the first group was observed in 47% of patients, in the control group in 42% (P=0,66). Mortality in both groups did not differ significantly and amounted to 22% and 25%, respectively.

Conclusion: The first results of the FORTA RF multicenter study demonstrate the safety and efficacy of Fortelyzin in staged reperfusion therapy compared to Actilyse.

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AB001034

Heterogeneous treatment effects of Cerebrolysin as an early add-on to reperfusion therapy: post hoc analysis of the CEREHETIS trial

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Keywords:
Cerebrolysin
Hemorrhagic transformation
Reperfusion therapy

Background: Subjects differ not only in their background characteristics but also in their responses to a particular treatment. We looked at treatment effects of Cerebrolysin in stroke patients with varying risk of hemorrhagic transformation (HT).

Methods: It was post hoc analysis of the CEREHETIS trial (ISRCTN87656744). Patients with middle cerebral artery infarction (n = 238) were selected from the intention-to-treat population. To stratify participants according to their HT risk, the DRAGON, SEDAN and HTI scores were computed for each eligible subject using on-admission data. The study endpoints were any and symptomatic HT, and functional outcome measured with the modified Rankin Scale (mRS) on day 90. Favorable functional outcome (FFO) was defined as an mRS score of ≤2. The performance of each stratification tool was estimated with regression approaches. Heterogeneous treatment effect analysis was conducted using techniques of meta-analysis and the matching-smoothing method.

Results: The HTI score outperformed other tools in terms of HT risk stratification. Heterogeneity of Cerebrolysin treatment effects was moderate for symptomatic HT (I^2, 35.8%-56.7%; H^2, 1.56-2.31) and mild for any HT (I^2, 10.9%; H^2, 1.12). There was a positive impact of Cerebrolysin on HT and functional outcome in high HT risk patients. In particular, there was a steady decline in the rate of symptomatic (HTI=0 vs HTI=4: by 4.3%, p=0.077 vs 21.1%, p<0.001) and any HT (HTI=0 vs HTI=4: by 1.2%, p=0.737 vs 32.7%, p<0.001). Likewise, an mRS score reduction (HTI=0 vs HTI=4: by 1.8%, p=0.903 vs 126%, p<0.001) with a reciprocal increase of the fraction of FFO patients (HTI=0 vs HTI=4: by 1.2% p=0.757 vs 35.5%, p<0.001) was found.

Conclusion: Clinically meaningful heterogeneity of Cerebrolysin treatment effects on HT and functional outcome was established. Cerebrolysin was more effective in patients with a higher HT risk.

Others

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AB000077

MRI features in ischemic stroke patients with acute symptomatic seizures and poststroke epilepsy

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Keywords:
ischemic stroke
acute symptomatic seizures
poststroke epilepsy

Background: Epilepsy is among the top five comorbidities of stroke. The aim of the study was to determine specific MRI features in patients with seizures after ischemic stroke.
Objective. Two hundred and sixty-five patients with ischemic stroke leading to different types of epilepsy were compared to a control group of 203 patients who suffered from ischemic stroke but had no epileptic seizures. One hundred and forty-six (55.1%) patients had acute symptomatic seizures (ASS), while 119 (44.9%) had post-stroke epilepsy (PSE).

Methods: Patients underwent MRI on a 1.5 Tesla GE Medical system using a standard circularly polarized head coil. The imaging protocol included the following sequences: T1, T2, FLAIR, DWI with the evaluation of apparent diffusion coefficient (ADC), and MR angiography (3D-TOF).

Results: MRI data analysis showed the prevalence of cortical ischemic foci in patients with epileptic seizures (81,6%) as compared to the control group (38,7%, $\chi 2$=89,2, p<0,001). The median lesion ADC in patients with ASS was 0.00058mm2/sec, while this parameter was 0.00048 mm2/sec in the control group (p = 0,029). There were significant (p<0.05) differences in right hemispheric ischemic focus location both in patients with ASS and PSE compared to controls. Lesion location in mediobasal area of temporal lobe, inferior temporal gyrus, angular gyrus, and occipital lobe was significantly more frequent in ASS patients versus controls (AUC = 0,87, p = 0.00000023), PSE were observed during ischemia in the temporal lobe pole, superior temporal, precentral, inferior frontal gyri, motor and sensory cortex, inferior parietal lobule, insula (AUC = 0,77, p = 0,000228). White matter lesions (WML) were more prevalent (p<0.01) in patients with epileptic seizures.

Conclusion: The epileptic seizures following stroke are associated with cortical location of ischemic foci and WML. The differences in ischemic focus location in ASS and PSE patients and matched controls were revealed.