# EXPERIMENTAL STUDY OF CYTOKINE CEREBROPROTECTION IN EXPERIMENTAL HEMORRHAGIC STROKE

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*Purpose* was studying of effects of cytokine drugs – receptor antagonist is secreted (IL-1Ra) and IL-2 (ronkoleukin) on the dynamics of index of carbohydrate-energetic balance, oxidant stress, expression of genes of the early reaction and the intensity of neurological and cognitive disorder due to stroke in experimental hemorrhagic stroke in administration in dose of IL-1Ra 7,5 mg/kg and of ronkoleukin 0,01 mg/kg during 18 days.

*Materials and methods.* In homogenate of brain the ATP, ADP, AMP, the content of products of oxidative modification of protein (AFG and KFG), peroxidation of lipids (DK, TK, MDA) were measured. Antioxidant protection was evaluated by the activity of SOD, catalase, glutathionperoxidase. Expression of c-Fos protein in sensor-motor zone of cortex was founded. Using the standard methods of oriental-studying habits, neurological deficit (by scale of Stroke – index McGrow), the conditioned reflex of passive avoidance was estimated.

*Results and discussion.* We set that IL-1Ra (mostly) and ronkoleukin optimizes all indexes – decreases degree of oppression of oxidative processes in Krebs cycle, increases the intracellular stock of ATP, stabilizes the activity of pro- and antioxidant results when the synthesis of c-Fos protein was inducted, activation of apoptosis, improves the index of movement activity, psychoneurological status were revealed.

*Conclusions.* Effects more expressed in recovery period that testifies the necessity of application of cytokine drugs as cerebroprotective in hemorrhagic stroke.