**THE INCREASE OF CELLULAR ANTIOXIDANT ENZYMES ACTIVITY BY METABOLIC DRUG ELTACIN IN THERAPY OF ELDERLY PATIENTS WITH ISCHEMIC HEART DISEASE**

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**Objectives:** Chronic increases in oxidative stress due to deficient antioxidant defenses can subsequently contribute to aging as well as to the development and/or progression of cardiovascular diseases. Here we studied the effect of metabolic drug eltacin contained amino acids (glutamate, cysteine, glycine) on cellular redox state in elderly patients with ishemic heart disease.

**Methods:** The use of eltacin (220 mg x 3 times per day) in addition with traditional therapy (β-adrenoblockers, aspirin, Ca-antagonists, nitrates, diuretics) of elderly patients (69 ± 2.7 years old) with ischemic heart disease, angina pectoris functional class II-III was estimated. Before and 21 days after the therapy ECG-monitoring, EchoCG data were examined. Activities of antioxidant enzymes, reduced (GSH) and oxidized (GSSG) glutathione maintenance in erythrocytes, malonyl dialdehyde (MDA) level in plasma have been tested.

**Results:** The therapy with eltacin resulted in an increase of key antioxidant enzymes (Cu,Zn-superoxide dismutase, catalase) as well as GSH maintenance, GSH/GSSG ratio, activity of GSH-related enzymes (glutathione peroxidase, glutathione transferase) and redox-enzymes glutaredoxin and thioredoxin in erythrocytes up to control values depressed until the treatment. The elevation in antioxidant state of erythrocytes was accompanied by the decrease of lipid peroxidation. Extent of the development of antioxidant response was time-related and correlated with positive alteration of patient states: a rise of exercise tolerance, reduction of myocardial power consumption, antiarrhythmical effect.

**Conclusions:**Eltacin has the ability to increase antioxidant status that give it perspective for the use in therapy of elderly patients with ischemic heart disease.

The publication was prepared with the support of the «RUDN University Program 5-100».