

it is known, an alpha rhythms of biopotentials of a brain of the person, a cat and a rabbit coincide.

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SOME CEREBRAL FEATURES OF METABOLISM IN PATIENTS WITH COGNITIVE DISORDERS WITH BACKGROUND PSYCHO-VEGETATIVE SYNDROME

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In the environment of intense rhythm of modern life, emotional and information overload the cognitive disorders develop in background of psycho-vegetative syndrome (PVS) not infrequently in frames of anxiety or anxiety depressive disorders. Usually, cognitive deficit presents with mild to moderate disorders. Accordingly to statistics, more than 25% of patients of the somatic network have PVS [1]. In some patients the vegetative symptoms are leading in clinical presentation, in others the mental disorders come to the fore [2]. Cognitive disorders coexist with anxiety and depressive conditions, and later they can aggravate resulting in professional and social disadaptation. These studies of cerebral metabolism in pre-dement impairments with background PVS will allow to make patient's complaints objective, and to improve the treatment and prevention of cognitive disorders.

Purpose of the study: to investigate cerebral metabolism in patients with PVS to improve the treatment and prevention of cognitive disorders.

Materials and method. To study cerebral metabolism, 29 patients with age under 55 with mild to moderate pre-dement cognitive disorders and 20 healthy volunteers without signs of cognitive disorders as a control were examined. Cerebral metabolism was estimated with help of neuroenergy mapping (NEM), the electrophysiological method based on the detection of level of constant potentials (LCP), slowly varying potential of millivolt range reflecting membrane potentials of neurons, glia and hematoencephalic barrier.

Results. Normal results of LCP were obtained in 17,2% (5 of 29) patients. Increased metabolism was observed in 58,6% (17 of 29) patients with PVS. Decreased metabolism was seen in 24% (7 of 29) patients. Background metabolism in patients with PVS significantly differed from the reference values. In control group of healthy volunteers the background metabolism didn't differ from the reference values.

Discussion. NEM method estimates glucose metabolism in the brain [4]. Unlike PET, NEM reflects the state of backup pathways, i.e. anaerobic glycolysis, catabolism of ketone bodies, amino acids. With chronic or severe stress the anxiety or anxiety depressive disorders develop resulting in increase of functional cerebral activity, activating of anaerobic glycolysis, and developing of acidosis. The lower pH, the higher the level of constant potential [5].

Increase of metabolism corresponds to the first stage of stress by Selye (increase of adaptation), and decrease of metabolism corresponds to the third stage of stress (exhaustion of adaptation). Thus the most profound impairments of cerebral functional activity appeared in the group of patients with decreased metabolism.

Conclusions. Assuming all the data on increased metabolic processes in 58,6% of the examined subjects that indicate to the activation of backup pathways, it is reasonable to recommend sedation in combination with antioxidants and non-stimulating neurometabolic drugs to the patients with pre-dement impairments with background PVS.

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