

The neurological status at the moment of admission to the hospital of one part of children was characterized by severe moving disorders: spastic tetraparesis (46,2%), in combination with hyperkinetic syndrome (15,4%), disorders of skull-brain nerves (30,8%). Another part of children had diffuse muscle hypotony (15,4%), pyramidal insufficiency (15,4%).

Thus, disorders of epileptic genesis, usually symptomatic, are part of the paroxysmal disorders in the examined children.

INDEPENDENT COMPONENTS OF THE COGNITIVE INDUCED POTENTIALS IN PATIENTS WITH DEPRESSIVE DISORDER

Polyakova Galina

Academic adviser: Tochilov Vladimir, M.D., Ph.D., Professor; Kropotov Yury, Ph.D., Professor, Northwestern State Medical University "I. I. Mechnikov", Sankt-Petersberg, Russian Federation

The purpose of this study was to identify the changes in the independent components of induced potentials in patients with different depressive genesis disorders in two models of active Go / NoGo test of selective attention (VCPT - visual continuous performance test, ECPT - emotional continuous performance test). The study involved 34 patients aged from 26 to 79 years with clinically verified depressive syndrome. Both tests consisted of 400 samples, the samples were pairs of visual stimuli: the animal-animal (sample Go), animal-plant (sample NoGo), herb-herb (Ignore), and the plant-Man (Novel), or face image variations of different emotional modality. The samples were presented randomly with 25% probability. Novel assay was accompanied by an audible signal. The subjects were instructed to press a button as quickly as possible, upon presentation of a pair of «animal-animal» or «angry face, angry face» and not to click on the presentation of the other pairs of stimuli. For the EEG registration electrode cap Electrocap was used with 19 electrodes placed on the surface of the head in line according to the international system 10-20. Before processing, the EEG was converted into a common average montage. Calculation of independent components of induced potentials was carried out automatically in the program using the WinEEG INFOMAX algorithm. To highlight the eight components which have the largest amplitude, spatial filters are used, calculated on the basis of the normative database of Go / NoGo test. Dedicated independent components were averaged separately for groups of patients and for the comparison group.

To determine the localization of independent components of evoked potentials, and obtain the corresponding topographies the program sLORETA was used. Independent component analysis of induced potentials in VCPT represented significant and meaningful reduction in the amplitude of the component of patients with depressive disorders which was generated in the superior parietal cortex, known for reflecting a reaction to the sound. Analysis indicated the amplitude of the component reduction, which is generated in the occipital cortex, known for reflecting the primary processing of visual stimuli. Analysis displayed the reduction of the component amplitude, which reflects the reaction to the new incentive and monitoring activities. Independent component analysis of evoked potentials in the ECPT also showed a significant and meaningful reduction in the amplitude of the component that is generated in the occipital cortex and known for reflecting the primary processing of visual stimuli. This analysis displayed the decrease of the component amplitude that is generated in the prefrontal area, and probably that reflects the reaction to a new stimulus. These characteristics of induced potentials may correlate to the clinic with a depressed patient's weakness in reactions to any external stimuli.

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