Neuropsycological Consequences of Severe Brain Injuries

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One of the main factors causing misadaption in patients with severe brain injury (SBI) are mental impairments that precluding many patients from returning to previous jobs and social relations, and sometimes requiring constant supervision. The tasks are to develop differential approaches to diagnosis and treatment of neuropsychological disorders, to study mutual influence of emotional-volitional impairments on cognitive deterioration in the long-term SBI. Methods. 250 patients were examined, 190 men and 60 women. Group A included 160 patients with severe brain contusion. Group B included 90 patients with compressed brain contusion. Inclusion criteria: a 2-3 year history of SBI; age range - 18-50; post-traumatic changes evidenced by CT, MRI; sufficient level of education. The following methods and scales were used: Montreal Cognitive Assessment, Beck Depression Inventory, Sheehan Self-Esteem Scale; Clinical Anxiety Rating Scale; Montgomery-Asberg Depression Rating Scale, methods for studying modal-specific memories by Rubinshtein, Korotkov, Lurea, Benton. The findings showed depression in 43.2%; afferent lability in 59.3%; increased anxiety in 65.1%; decreased resistance to stress in 25.9%; reduced immediate and delayed recall in 59.8% and 65.5%; memory instability to interferes in 54.9%; reduced short-term, visual, motor, mediated memory in 56.7%, 32.2%, 21.9%, 30.1% consequently. The results demonstrated mild, average and severe degrees of symptoms. The violations detected were more serious in Group B compared to Group A (in particular, referring to severity of cognitive defects). Conclusions. The results of the study enable development of a system for assessing and predicting neuropsychological consequences, and new approaches to treatment and rehabilitation of patients with SBI.