



Features of the Clinical Course of Repeated Traumatic Brain Injury

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Abstract: Studies on various aspects of the clinic of closed traumatic brain injury (TBI), including repeated trauma, are widely presented in the literature. At the same time, certain aspects of the clinical course of repeated closed CTM are of some interest. The analysis of the results of a comprehensive study and treatment of patients who have suffered repeated traumatic brain injury indicates that this pathology is a qualitatively new clinical form of traumatic brain injury.

Keywords: repeated traumatic brain injury, intracranial hematomas.

Introduction. Diagnosis and treatment of traumatic brain injury currently remains one of the urgent problems of modern neurosurgery. In some cases, there are cases of repeated traumatic brain injury. At the same time, foci of bruises and intracranial hematomas are often formed [1,2,3,4]. The observed clinical signs of repeated TBI are often nonspecific, extremely variable, and more severe than the initial injury [6,7]. The clinic of repeated traumatic brain injuries proceeds with longer, persistent cerebral and focal symptoms.

The purpose of the study: To identify the features of the clinical course of repeated traumatic brain injury.

Material and methods: During 2015-2020, 87 patients who underwent repeated closed TBI with characteristic features in the acute period were treated and monitored. Methods of computer and magnetic resonance imaging of the brain, electroencephalography, lumbar puncture, clinical and neurological examination were used in the examination of patients.

Results and discussion: Among the examined patients, brain concussion was noted in 61.4% of the examined patients, brain contusions - in 38.6%. When distributing patients by type of injury: concussion of the brain - 39 patients, mild brain contusions in 5 patients. Severe open TBI was observed in 5 cases, and closed TBI - in 7, of which 4 patients were fatal. The group of patients with mild recurrent traumatic brain injury, its symptom complex and clinical course is of the greatest interest. In all patients with repeated traumatic brain injury, loss of consciousness of varying duration was noted. There was a more significant severe course of general cerebral symptoms - headache, dizziness, nausea, vomiting, sleep disorders and psychoemotional sphere. Headache was noted in all observations and was persistent. The duration of the headache was observed for 10-15 days. Dizziness - occurred in 89% of cases and usually occurred in the first days after the injury, increasing with a change in the position of the head and body. In the neurological status of all examined patients, spontaneous horizontal nystagmus of varying severity, from small to large-scale, was determined. Nausea and vomiting were common - 72% of cases, which was characterized by a persistent course. Focal symptoms were characterized by unstable character and rapidly regressed under the influence of conservative therapy. A characteristic feature of the clinical course of repeated

TBI is the early manifestation of disorders in the emotional and mental sphere. During the examination of patients, tachycardia was observed, followed by bradycardia, discomfort in the chest area, detected on the ECG as violations of repolarization processes. On the first day, within 3-5 days after the injury, some patients had subfebrile fever, chills. In most cases, there was hyperhidrosis of the palms of the hands, fragility of the nail and hair. The aggravation of the clinical course with repeated traumatic brain injury was a consequence of the development of intracranial hypertension and increasing cerebral vascular insufficiency. Hypertension syndrome was detected in 75 examined patients, which was difficult to treat. The conservative treatment carried out included generally accepted treatment regimens: dehydration, analgesic, nootropic, resorption, rehabilitation and restorative therapy. According to the terms, patients with repeated traumatic brain injury underwent longer treatment than usual. When analyzing deaths in repeated severe traumatic brain injury, attention is drawn to diffuse brain damage, manifested by gross morphological changes and pronounced focal, meningeal symptoms. We observed 25 patients who had a history of severe traumatic brain injury. Of these, 7 patients had a post-trepanation defect of the skull. All patients underwent a complete clinical and laboratory examination. In 3 patients, after examination by computed tomography, an intracerebral hematoma of frontal pain was detected, while the hematoma in the right hemisphere was larger than in the left hemisphere. During an emergency operation - bilateral bone resection trepanation of the skull with removal of intracerebral hematoma - a strong crushing of the brain substance was revealed. It was this kind of repeated TBI that greatly affected the results of treatment and caused illness and death in one case. The rest of the patients underwent conservative treatment. Following the fatal outcome, after 3-4 days after the injury, extensive bruising and crushing of the brain substance was pathomorphologically revealed. Clinical analysis shows that with repeated severe traumatic brain injury, the decisive and aggravating factor of traumatic brain injury is the crushing of the brain substance.

Conclusions:

1. Repeated traumatic brain injury in the acute period is much more severe and requires longer inpatient treatment.
2. Clinically, repeated TBI is manifested by more persistent cerebral and focal symptoms, which leads to more severe brain damage.
3. Patients who have suffered repeated traumatic brain injury should undergo comprehensive treatment and rehabilitation and rehabilitation measures.

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