

NEUROLOGICAL ASPECTS OF POST-TRAUMATIC ENCEPHALOPATHY

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Annotation. Traumatic brain injury (TBI) has serious long-term consequences, including chronic encephalopathy with various syndromes. Traumatic brain injury (TBI) is one of the most important aspects of research in neurological practice, due to the high frequency, difficulties of diagnosis and severity of its course, often fatal outcome. It has a generalized effect on the body, causing a general adaptive reaction, manifested in a complex of pathophysiological, biochemical and morphofunctional changes not only in the area of direct mechanical damage, but also in the nervous, endocrine, cardiovascular and other systems. Mostly men die from this injury and more often of working age, which gives the whole problem social significance. With autonomic dysregulation, angiodystonia with altered arterial tone is observed. Epileptic syndrome is also accompanied by angiodystonic disorders. Liquorodynamic disorders are characterized by increased peripheral resistance, venous discirculation and asymmetry of blood flow in various vascular beds in cerebral focal syndrome. These hemodynamic changes indicate the need for differentiated therapy depending on the leading clinical syndrome.

Key words: TBI, encephalopathy, head injury, cerebrospinal fluid dynamics.

Relevance. Traumatic brain injuries (TBI) are one of the leading causes of death and disability among working-age citizens in developed countries. They rank third among causes of mortality, behind cardiovascular diseases and cancer. During the discussion, meeting members reviewed some figures. It was recorded that in 2019 in Uzbekistan, 2067 people died in road accidents, in 2020 - 1962, in 2021 2436 died in road accidents. TBIs are the cause of death for almost half of injured victims. In Uzbekistan, according to the Institute of Health of the Ministry of Health of the Republic of Uzbekistan, the number of mechanical injuries per 100 thousand population is more than 3,000; in some regions of the country this figure is even higher. As for TBI, this figure exceeds 592 cases per year per 100 thousand population.

Injuries are most common among the young working population. Patients with post-traumatic cognitive impairment face significant limitations in daily life and require long-term care, resulting in high financial costs.

The pathological consequences of TBI have received increasing media attention following reports of progressive neurological dysfunction in athletes exposed to repeated concussions in high-intensity sports. (initially boxing and, in the last 8 years, American football), as well as a

growing number of war veterans with blast-related traumatic brain injury. Improved emergency care on the battlefield, and therefore improved survival, means that soldiers who previously might have died from polytrauma now survive and may develop significant cognitive deficits.

Pathogenetic mechanisms of encephalopathies after TBI. ICD-10 classifies conditions following traumatic brain injury as “post-concussion (or post-concussion) syndrome,” emphasizing disturbances in cognition, emotion, and behavior. Some experts suggest using the terms "traumatic brain disease" or "traumatic encephalopathy" to refer to this condition.

Traumatic encephalopathy (TE) is a complex of neurological and psychological disorders that occur after traumatic brain injury. It is caused by degenerative, dystrophic, atrophic and cicatricial changes in brain tissue resulting from injury.

Criteria for diagnosing post-concussion syndrome include:

- * Severity of traumatic brain injury: loss of consciousness for more than 5 minutes, post-traumatic amnesia for at least 12 hours, first-time epileptic seizures within the first 6 months after injury.
- * Mandatory symptoms: cognitive impairment, affective-vegetative disorders.
- * The severity of these changes and their impact on social functioning. [Moretti L, et al 2012]

There is acute and chronic encephalopathy after TBI:

Acute consequences

Many complications of TBI occur immediately or shortly after the injury. [Lange RT 2012] Acute post-traumatic sensory, motor and neurocognitive syndromes often occur due to brain contusions, intracerebral hemorrhage and axonal rupture. Skull fracture further complicates the pathobiology, leading to direct brain rupture and hemorrhage if the fracture is severe or depressed, and also increases the risk of ischemia due to vasoconstriction provoked by blood products, seizures, and infection. A seemingly mild closed-head TBI, in which the skull is not fractured, can lead to a variety of and sometimes disabling symptoms, such as chronic headaches, dizziness and dizziness, difficulty concentrating, difficulty finding words, depression, irritability and impulsiveness. The duration of such symptoms varies, but can be months or more.

Post-traumatic stress disorder (PTSD) is a common co-occurrence of military-related TBI, especially in severe cases. [Wall PL 2012] Each syndrome can occur separately from the other: PTSD can occur after events of severe stress, and TBI can even occur in combat. without leading to post-traumatic stress. Their relationship, and how to differentiate and treat both disorders, is a growing area of research.

TBI sustained during combat is usually associated with an explosion, such as from artillery or an improvised explosive device, and these explosions often push soldier against the wall or interior of the vehicle, which can cause head injury when decelerated. While distinguishing between blast injury and deceleration-induced head injury is not always possible, research is being conducted not only to track the severity of head injuries in soldiers using accelerometers in smart helmets, but also to potentially counteract the harmful effects of blast.

Purpose of the study. To study the long-term consequences of traumatic brain injury (TBI), in particular the development of chronic encephalopathy with various syndromes, and to determine optimal approaches to differentiated therapy depending on the leading clinical syndrome.

Result and discussion. Traumatic brain injuries (TBI) are a major public health problem. Because of their high prevalence and heavy burden of disability and mortality, TBIs have a significant impact on affected individuals, their families, and society at large.

The article highlights the need for more effective strategies for the prevention and treatment of TBI. This includes taking steps to improve road safety, promoting the use of protective equipment in sports and combat, and improving early detection and treatment of TBI.

In addition, there is a need to improve understanding of the long-term effects of TBI, especially subconcussive TBI, which can lead to gradual cognitive decline and other neurological problems. Further research is needed to determine the most effective methods for identifying and treating these conditions.

Conclusions: In conclusion, TBI continues to pose a significant public health challenge worldwide. Addressing this problem requires a comprehensive effort that includes prevention, treatment and rehabilitation measures, as well as further research to improve the understanding and treatment of this devastating condition.

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