

**SOME FEATURES OF THE MORPHOMETRIC PARAMETERS OF THE SPLEEN AFTER VARIOUS FACTORS OF INFLUENCE ON THE BODY****X. B. Fayziev, G. Kh. Khuseynova**

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**Keywords:** spleen, white pulp, red pulp, immunity, microcirculation**Таянч сўзлар:** талоқ, оқ пулпа, қизил пулпа, иммунитет, микроциркуляция.**Ключевые слова:** селезенка, белая пульпа, красная пульпа, иммунитет, микроциркуляция.

The article analyzes the literature data on morphofunctional changes occurring in the spleen under the influence of various factors on the body. Examples of changes in the spleen tissue under the influence of physical exertion, under the influence of heavy metals, under the influence of medications, under the influence of ionizing radiation, as well as studied under the influence of immunosuppressors, changes in antigenic stimulation, under the influence of stress of various origins, when exposed to the peripheral nerve and under the influence of gravity.

**ТАЛОҚНИНГ MORFOMETRIK PARAMETRLARINING ORGANIZMGA TURLI TAЪSIR ETUVCHI OMILLARDAN KEYINGI AYRIM ХУСУСИЯТЛАРИ****Х. Б. Файзиев, Г. Х. Хусейнова**

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Мақолада талоқда вужудга келган морфофункционал ўзгаришлар ҳақида турли омиллар таъсирида адабий маълумотлар таҳлил қилинади. Турли келиб чиқиши stress таъсири остида, периферик асаб таъсири остида ва тортишиш таъсири остида, ионлаштирувчи нурланиш таъсири остида дори таъсири остида, жисмоний машқлар таъсири остида талоқ тўқималарининг ўзгаришлар, шунингдек, иммуносупрессантлар таъсири остида антиженик рағбатлантириш ўзгаришлар мисоллар.

**НЕКОТОРЫЕ ОСОБЕННОСТИ MORFOMETRICHESKIX PARAMETROV SELEZENKI POSLE RAZLICHNYX FAKTOROV VOZDEYSTVIYA NA ORGANIZM****Х. Б. Файзиев, Г. Х. Хусейнова**

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В статье анализируются литературные данные о морфофункциональных изменениях, происходящих в селезенке под воздействием различных факторов на организм. Примеры изменений ткани селезенки под влиянием физических нагрузок, под влиянием тяжелых металлов, под влиянием лекарственных препаратов, под влиянием ионизирующего излучения, а также изученные под влиянием иммунодепрессантов изменения антигенной стимуляции, под влиянием стресса различного происхождения, при воздействии на периферический нерв и под действием силы тяжести.

When conducting epidemiological studies of a traumatic brain injury in one of the areas, the following sequence in the structure of this injury was revealed. In this structure of craniocerebral injuries, concussions of the brain predominate 57.8%, followed by: soft tissue injuries of the head (36.3%), brain contusions (9.2%), compression of the brain (1.7%) [1,4]. The structure of craniocerebral injuries changes with age: the proportion of patients with concussions of the brain decreases and the proportion with injuries of the soft tissues of the head, with severe bruises and compression of the brain increases slightly. Injuries in everyday life predominated, among them 33.8% were intentional injuries. Industrial injuries accounted for 17.8%. The proportion of occupational injuries was higher in the 20 to 29-year-old age group. It accounted for 26.5% of all occupational injuries. 98 % of all craniocerebral injuries are closed injuries. Subarachnoid hemorrhages were observed with a frequency of 0.29 cases per 1000 population. Subarachnoid hemorrhages were more common in men (0.44%) than in women (0.18%). Fractures of the skull bones were noted with a frequency of 0.22 cases per 1000 people of the population. The frequency of brain compression was 0.02 cases per 1000 people of the population. These were usually subdural hematoma compressions. In 7% of the victims, the injury was repeated. Combined trauma was registered in 6,552 TBI patients. The prevalence rate of concomitant trauma was 0.57 %. Especially significant was the proportion of combinations of TBI with fractures of the bones of the extremities and pelvis. It accounted for 29.9% of all combined TBI. There were slightly fewer TBI cases

in combination with rib fractures and chest injuries(26.5%). The majority of patients with TBI were admitted to medical institutions in a satisfactory condition (95.9% of all victims) [1, 4,]. Most authors indicate that TBI is more common in men than in women. According to various data, the male/female ratio among patients with TBI ranges from 2:1 to 3:1, 4:1 and more [1,7].

The greatest disparity in the prevalence of traumatic brain injury between men and women, exceeding the average, is detected in the age groups of 20-24 years and corresponds to a ratio of 1:4.27, i.e., according to statistics, men receive this type of injury two to four or more times more often than women in almost all age groups, with the exception of groups older than 70 years. The average age of the victims is from 23 years to 39.6 years, which is of socio-economic importance due to the temporary or permanent disability of the most active part of the population. In the literature, it is more often mentioned that the highest level of injuries is observed in men and women aged 20-40 years, which is up to 65% of the total number of victims [1,4,11].

In recent years, the proportion of patients over 60 years of age has increased in the structure of traumatic brain injury [20,22]. Thus, the tasks of primary prevention of injuries in general and craniocerebral injuries in particular lie outside the limits of medicine and are closely related to the social structure and development of society. Treatment of victims with traumatic brain injury, secondary prevention of its consequences and complications are the responsibility of health care and primarily of clinicians-neurosurgeons, neurologists, psychiatrists, traumatologists, resuscitators, rehabilitologists, etc. Their proper training in craniocerebral trauma is a rather complex and far-from-solved problem [2, 4]. With the advent of new opportunities for direct non-invasive brain imaging and monitoring of its functions for both diagnostic and research purposes, knowledge on the pathogenesis and sanogenesis of CNS pathology, including traumatic, has significantly expanded. Neuro-resuscitation and neurorehabilitation were developed. In the surgical treatment of cerebral injuries and their consequences, minimally invasive techniques, reconstructive interventions, microneurosurgery, new techniques and new medical technologies have become widely used. The concepts of focal and diffuse injuries, primary and secondary brain lesions, and the phasicity of the clinical course of various forms of craniocerebral trauma were confirmed and recognized. As a result, it has undergone significant changes. [4,17].

Morphology preserves and strengthens its position as a fundamental natural history science and makes a significant contribution to the progress of neighboring biological and medical Sciences. A rich Arsenal of modern morphological knowledge is used to solve problems in clinical medicine. Modern morphology is the science of the biological organization of cells, tissues, organs, and the human body, which is inextricably linked to practical health care [19]. The spleen is an organ that has diverse and insufficiently studied functions. Currently, the spleen is considered to be the main organs of immunogenesis; blood is deposited in its sinuses, red blood cells break down and iron exchange associated with it, and the spleen is considered as a bacterial blood filter that plays an important role in the fight against infection. In addition, it is known that the spleen participates in the blood clotting process, producing coagulation factor VIII [3]. The immune system is one of the most complex autonomic regulatory systems of the body, so a violation of its functional capabilities leads to severe complications of autoimmune and infectious nature. In this regard, in recent years, the issues of preserving immune homeostasis have become particularly relevant and are reflected in the research of domestic and foreign authors [14, 18]. The number of mast cells during antigen stimulation initially increases sharply (on the 2nd day after the introduction of the antigen), and then gradually decreases and by the 30th day is compared with the norm [16]. Hydrocortisone has a similar effect on the organ metric parameters of the spleen [7]. Similar processes that indicate the development of an immunological reaction of the body occurred when exposed to toxic doses of sodium Salinity, lead cautions, and copper [5, 8, 9]. The introduction of cadmium cautions does not cause a General immunological reaction, but has a direct toxic effect on the spleen tissue [6]. Under systematic physical exertion, an increase in absolute morph metric parameters of marginal zones is observed in rats, which is a morphological confirmation of the increase in their B-immunological reactivity [11].

Changes in the spleen of animals exposed to sub lethal doses are more pronounced. Data indicate that animals (mice and rats) with a single total X-irradiation at a dose of 5.8-6 Gy from 6 days after irradiation showed a marked drop in the number of neutrophils, T-lymphocytes, which was retained for up to 10 days [10].

These data coincide with the results of studies by other authors and confirm the presence of a progressive immunodeficiency state after radiation damage [12]. Ionizing radiation in sub lethal doses also has a negative effect on the state of the spleen cell membranes (in particular, the membranes of lissome) [13].

When a peripheral nerve is injured in the spleen, the ratio of white and red pulp changes (towards white), and the cellular composition of the organ changes, in particular, in the lymphoid population. The most significant manifestations are detected 3 weeks after damage to the nerve trunk, gradually decrease - after 6 weeks, and approach the control indicators within 12 weeks [15].

At each stage of the immune response, a "duality" may occur and the focus of immune responses may switch from Pro-inflammatory to anti-inflammatory, from immune pathological to immunosuppressive, from neurodegenerative to immune processes that stimulate the regeneration of damaged brain tissue [17,18 ].

Thus, the influence of factors of different Genesis on the body can be manifested by Hypo-or hyper function of the spleen. The depressing effect is manifested by a decrease in the proliferation and differentiation of immune competent cells and, as a result, cellular devastation, increased apoptosis and macrophage activity (such is the effect of stress, ionizing radiation, severe pathological conditions of the body). When exposed to chemical or biological factors (especially in the first days of the experiment), there is an increase in cell proliferation and differentiation, hyperemia of the organ, an increase in the number of LU with germinative centers or their fusion [17, 21 ].

Currently, the Department of clinical anatomy of the Bukhara state medical Institute named after Abu Ali Ibn Sino is conducting research on the impact of traumatic brain injury on changes in the morphofunctional parameters of internal organs, including the spleen, this will help to deepen the understanding of the mechanisms of adequate response of the spleen to exogenous factors. Currently, the Department of clinical anatomy of the Bukhara state medical Institute named after Abu Ali Ibn Sino is conducting research on the impact of traumatic brain injury on changes in the morph functional parameters of internal organs, including the spleen, which will deepen the understanding of the mechanisms of an adequate response of the spleen to exogenous factors.

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