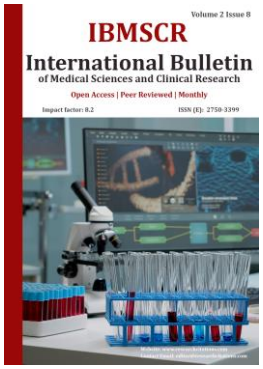

ACUTE AND CHRONIC BLOOD CIRCULATION DISORDERS IN THE BACK OF THE BRAIN.

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Abstract: We know that all human activities are controlled by the nervous system. In humans, the nervous system is divided into central and peripheral nervous system. This article discusses acute and chronic disorders of blood circulation in the spinal cord, which is considered a part of the nervous system, as well as the general features of their pathologomorphological changes.

Key words: atherosclerosis, spinal strokes, lumbar segments, Adamkevich's artery, disc herniation, X-ray contrast.

There are many factors that cause acute and chronic disorders of blood circulation in the spinal cord. Arterio-venous malformations, coarctation of the aorta, atherosclerosis of aortic branches, hypoplasia, anomaly, thrombosis and embolism of spinal arteries, osteochondrosis, disc herniations, compression injuries of the spine, oncological diseases, leukemia and general hemodynamics decrease (blood loss, myocardial infarction) spinal causes acute and chronic disorders of blood circulation. Vertebrogenic factors also play an important role in spinal blood circulation disorders. In osteochondrosis, the disc thins, sinks, and as a result, the intervertebral foramen narrows. Crushing of the arteries is also caused by displacement of the spine, i.e. displacement (spondylolisthesis). Also, if the bone tissue thickens and osteophytes appear, the intervertebral foramen narrows. Narrowing of the intervertebral foramen, through which the radiculomedullary arteries pass, necessarily leads to vascular myeloischemia. Any movement of the vertebrae in this area compresses the radiculomedullary arteries passing through it. Excitation of spinal receptors leads to reflex spasm of radiculomedullary arteries and disturbance of spinal blood circulation. Spinal ischemias manifested in a reflective manner are transitory. Compression of the radiculomedullary arteries also develops due to prolapse of the lower lumbar discs. Disorders of spinal blood circulation that develop due to osteochondrosis and its complications are called "vertebrogenic vascular myeloischemias". Chronic lack of blood circulation in the spinal cord is often manifested by local symptoms. In which area of the spinal cord is the disease clinic depends on which artery is damaged. The following disorders of blood circulation in the spinal cord are distinguished: 1) transient disorders of spinal blood circulation; 2) spinal

strokes (ischemic and hemorrhagic); 3) chronic disorders of spinal blood circulation. Neurological symptoms caused by acute spinal ischemia in transient disorders of spinal circulation disappear within a few minutes. Unterharnscheidt syndrome. This syndrome occurs when the head is sharply turned back and turned. As a result, acute ischemia of long brain and spinal segments develops. Paralysis suddenly appears in both arms and legs, the patient falls down unconscious. Fainting is associated with acute ischemia of the reticular formation in the brain stem. The patient regains consciousness after 1-2 minutes. After a while, movements in the limbs begin to return. If acute ischemia is observed only in the neck segments, only tetraparesis develops and the patient does not lose consciousness. Dejerin syndrome. When the patient begins to walk, the legs cramp and weakness appears. Cramps and paresthesias are also observed in the lower abdomen. The function of the pelvic organs is disturbed. When the patient sits and rests for 5-10 minutes, the symptoms disappear.

The patient gets up and starts walking again. This syndrome occurs in acute ischemia of the lower thoracic and lumbar segments of the spinal cord. Damage to the anterior spinal artery (radiculomedullary artery) of the neck width. Peripheral paraparesis develops in the hands and central paraparesis in the legs, that is, mixed tetraparesis. Movement disorders are sometimes mild, sometimes at the level of tetraplegia. Sensory disturbances occur in the segmental type in the affected area, and in the conductive type below. The function of the pelvic organs is disturbed in the central type. In chronic compression of the radiculomedullary artery, the symptoms of the disease are similar to the clinic of amyotrophic lateral sclerosis. In case of acute thrombosis or compression of an artery, the clinic of the disease develops in the form of an acute spinal stroke. Braun-Secard syndrome appears in one-sided damage of the artery (traumatic, compression, thrombotic): central paresis on the side of the lesion, conduction-type disturbance of surface sensation on the opposite side. However, the deep sensation remains intact, because the back of the spinal cord is supplied with blood by the posterior radiculomedullary artery. When the back spinal artery is damaged, an infarction occurs in the area where the back column of the spinal cord (Goll and Burdach tracts), part of the back branches, the back side of the side columns, i.e. the pyramidal tract passes. As a result, profound sensory disturbances, sensory ataxia, and mild spastic paraparesis develop in the legs. Damage to the anterior large radiculomedullary artery (Adamkevich artery). The clinic of the disease depends on which and how many areas of the spinal cord are supplied with blood by the Adamkevich artery. At the same time, the presence of anterior accessory radicular (Deproj-Gotteron artery), upper and lower accessory radiculomedullary arteries also affects the formation of the disease clinic. Blood circulation in the Adamkevich artery chronic disorder causes "alternating lameness" syndrome. The symptoms of this syndrome are weakness and heaviness of both legs when walking (as if a stone is "hanging" on both legs), urge to urinate, paresthesias and pain spreading to both legs, pelvis and lower back. Such patients walk with a limp. After the patient stops walking and rests for a while, the legs regain strength and the patient starts to walk comfortably. But this relief does not last long, and after taking a few steps, the patient begins to limp again. That is why this syndrome is called "alternating lameness" syndrome. "Alternating lameness" syndrome is observed not only in the damage of the arteries supplying blood to the spinal cord and its structures, but also in damage (thrombosis) of the trunk arteries supplying blood to the legs. In both cases, the clinical symptoms are very similar. Therefore, it is necessary to carry out additional tests to determine the real cause of the disease. For this purpose, it is

necessary to undergo an MRT of the spine and to examine the main arteries of the legs with the method of duplex scanning. Compression of the artery of Adamkiewicz usually occurs during sudden heavy lifting and is more common in the elderly. In such cases, sudden paralysis develops in both legs. This is a type of acute spinal stroke. If acute ischemia develops at waist width, peripheral type in both legs, above waist width, lower central paralysis develops. Superficial sensation is impaired in the conductive type, deep sensation is impaired at the beginning of the disease. The function of the pelvic organs is impaired in the peripheral or central type. In a few days, trophic ulcers begin to appear on the legs. Recovery of damaged spinal functions is very slow. In particular, the function of the pelvic organs recovers very slowly. Injury of the lower accessory radiculomedullary artery. The lower accessory radiculomedullary artery supplies blood to the spinal roots that form the cauda equina. Since this artery passes by L5 and Si spinal roots, its compression is often observed in disc herniations of L4-L5, L5-S1 vertebrae. It is known that disc herniations are common in this area. That is why we often observe compression of the lower accessory radiculomedullary artery in practice. Compression of this artery is manifested by ischemia of the L5 and S1 spinal roots forming the tail of the horse and partial lumbar segments. In many cases, "myelogenous alternating lameness syndrome" develops. The disease often begins with radicular pain, anesthesia in the anogenital area, urinary and fecal incontinence. Atrophies are observed later. Peroneal muscles are often paralyzed: the patient cannot stand and walk with the heel part of the foot. Diffuse hypotonia and atrophy occurs in the buttock, hip and calf muscles. The Achilles reflex is reduced or absent. 12 Spinal stroke. Spinal stroke (spinal infarction) is an acute ischemic disorder of blood circulation in the spinal cord. Spinal stroke can develop acutely in any spinal artery. This disease is mainly observed in people over 40 years of age, and the incidence rate increases with age. The reason for this is the high incidence of vertebrogenic and cardiovascular diseases in the elderly. Spinal infarction often develops acutely or subacutely. Transient or chronic disorders of blood circulation in the spinal cord can be observed before the development of a heart attack. The clinic of a spinal stroke depends on which artery is damaged. An infarction develops in the ventral part of the spinal cord in case of acute damage to the anterior spinal artery. If an acute infarction develops in the width of the neck, spastic paraparesis develops in the arms and legs, superficial sensation is disturbed in the conductive type, and urinary and fecal retention is observed. If an acute infarction develops in the area of the chest segments, lower spasticity paraplegia appears, superficial sensation is impaired in conductive type, urinary and fecal retention is observed. If ischemia occurs in the anterior spinal artery or the anterior radiculomedullary artery of Adamkevich, which supplies blood to the lumbar region, lower peripheral paraplegia, paraanesthesia, and dysfunction of the pelvic organs (Stanilovsky-Tanon syndrome) occur. Diagnosis and comparative diagnosis. In order to make a correct diagnosis, it is necessary to know the topography of spinal blood circulation and its various variants. The diagnosis of acute and chronic disorders of blood circulation in the spinal cord is based on the anamnesis of the disease, etiological factors, the form of appearance of spinal symptoms, their course, and the results of paraclinical examinations. Spinal stroke begins acutely, and it is not difficult to make a correct diagnosis. In chronic myeloischemia, clinical symptoms develop slowly and make correct diagnosis much more difficult. Chronic myeloid ischemias are often manifested together with the clinic of osteochondrosis and disc herniation. Paraclinical methods include MRI, X-ray contrast, and radionuclide myelography.

Comparative diagnosis of spinal myeloischemia is mainly carried out with hematomyelia, subarachnoid spinal hemorrhages, multiple sclerosis, myelitis and tumors. It starts with eliminating the cause of the disease. Also, drugs that improve spinal blood circulation (xanthine nicotinate, pentoxifylline, sermion), anticoagulants (heparin, fraxiparin), antiaggregants (aspirin, warfarin, ticlopidine), diuretics (furosemide), anticholinesterase drugs (proserin, galantamine) are used. Surgical operations are performed in compression-vascular disorders. They should be held without delay. During the rehabilitation period, physiotherapeutic procedures, drugs (xanthine nicotinate, trental), electrophoresis, electrostimulation, magnetostimulation, radon baths, needle therapy, massage, vibromassage and physical therapy are carried out. Potassium preparations (asparkam, panangin), anticholinesterases, drugs that improve microcirculation and multivitamins are recommended. It is necessary to ensure normal functioning of pelvic organs and prevention of urogenital infections. The skin should be kept clean and bedsores should be prevented. Today, there are various computer-controlled devices (chairs, chairs, beds) for patients with spinal paralysis. They can be easily managed by the patient himself according to the doctor's instructions. Extensive use of these devices is recommended during rehabilitation. Psychotherapeutic help should also be provided on time. The etiological factor that caused the disease and when the treatment began depends. Immediate therapeutic and surgical treatment will save the patient from severe spinal paralysis.

References:

1.Asfandyorov, Javodbek, et al. "SYPHILIS (DISEASE), ITS SYMPTOMS AND PRIMARY CONSEQUENCES." International Bulletin of Medical Sciences and Clinical Research 2.10 (2022): 10-11.

2. Tashboltayevna, Ahmedova Saodat, Asfandiyorov Javodbek Mirzaali o‘g‘li, and Odilov Ramziddin Dilshod o‘g‘li. "Xushvaqtova Osiyo Asadulla qizi, & Rashidova Farangiz Musulmon qizi.(2022). LEISHMANIOSIS DISEASE, ITS SYMPTOMS, PRIMARY CONSEQUENCES AND DISTRIBUTION. Galaxy International Interdisciplinary Research Journal, 10 (12), 836–838."

3.Asfandiyorov, Javodbek, et al. "OSTEOPOROSIS AND ITS PREVENTION." Eurasian Journal of Medical and Natural Sciences 3.1 (2023): 139-142.

4.o'g'li, AJM ., Xushvaqtov , XIS o'g'li, qizi, SSI ., o'g'li, SXE ., & qizi, SMZ . (2022). JIRRAJYATNING ESTETIK TURLARI, PLASTIK JARROZIYa. EVROPA ZAMONAVIY TIBBIYOT VA AMALIYOT JURNALI , 2 (10), 143–144. http://www.inovatus.es/index.php/ejmmp/article/view/1231

5.Abdukamol qizi, NZ, Raxmat qizi, SX, Alisher o'g'li, AA, Raxmon o'g'li, AM, & Mirzaali o'g'li, AJ (2022). Kardiojarrohlik haqida. Central Asian Journal of Medical and Natural Science , 3 (5), 694-696.

6.Mirzaali o’g’li A. J. et al. TERMINAL CASES LUNG AND HEART RESUSCITATION TRANSFER PRINCIPLES //Galaxy International Interdisciplinary Research Journal. – 2022. – T. 10. – №. 10. – C. 729-731.

7.Mirzaali o’g’li, Asfandiyorov Javodbek, et al. "ANESTHESIA AND ITS GENERAL CHARACTERISTICS." Gospodarka i Innowacje. 28 (2022): 191-192.

8.Mirzaali o’g’li, Asfandiyorov Javodbek, et al. "Importance of medical prevention in medicine." Texas Journal of Medical Science 13 (2022): 175-176.

9.Choriyeva, Z., Asfandyorov, J., Aminova, M., Tojiddinov, D., & Bozorova, G. Z. (2022). KIDNEY ANATOMY, PATHOLOGY AND KIDNEY DISEASES: INFORMATION ABOUT NEPHRITIS. Академические исследования в современной науке, 1(15), 67-69.
10.Mirzaali o'g'li, Asfandiyorov Javodbek, et al. "Liver Anatomy, Histology And Physiology." Intellectual Education Technological Solutions And Innovative Digital Tools 1.11 (2022): 8-11.
11.Mirzaali o'g'li A. J. et al. Liver Structure and Functions, Hepatocytes Information About //American Journal of Economics and Business Management. – 2022. – Т. 5. – №. 11. – С. 215-216.
12.Asfandyorov, Javodbek, et al. "Cardiovascular diseases. Hypertension and hypertenic crisis." Eurasian Journal of Medical and Natural Sciences 2.11 (2022): 209-210.