after the medical treatment. Thus, the enzymes stimulation and activation of the purine exchange take its place against the background of the medical treatment for the balanced action of the immune system components.

As the researches have shown, the AMPH – DA activity factor is not being undergone the special changes in the blood lymphocytes at the dust and radiation exposure. The 5′–HT activity is being increased in 6,33 times, and the ADA is, on the contrary, being lowered almost in 1,7 time. These changes are being promoted to the adenosine and deoxyadenosine quantity accumulation, which in the increased concentrations are able to exert the cytostatic and cytological effect upon the lymphoid cells [5]. It has been registered the positive changes of the enzymes activity against the background of the medical treatment, that is in the increase direction: the ADA activity has been increased for 59,09% and AMPH – DA – for 56,25%. The research results have shown, that the ADA, 5′ – HT, and AMPH – DA enzymes activity in the liver at the animals just after the dust and radiation exposure has been increased up to 0,452±0,035 (e.g. $p<0,001$), up to 0,044±0,004 (e.g. $p<0,05$), and up to 0,229±0,022 (e.g. $p<0,001$), correspondingly. It has been registered the subsequent enzymes activity increase, which is being resulted in the metabolism activation of the purine nucleotides at the medical treatment.

It is quite known, that the cytoplasmic enzymes of the adenosine deaminase ADA and ПНФ are being catalized the consequent stages of the adenosine and deoxyadenosine degrative transformations, which are the intermediate metabolic exchange products of the purine nucleotides. The superficially – membrane 5' – nucleotidase is dephosphorylized the extractocellular AMPH with the adenosine formation, which is easily able to be transported inside the cell.

Thus, all these enzymes are being taken their part in the maintenance of the metabolites intracellular balance of the purine exchange – that is, the adenosine and deoxyadenosine, which in the increased concentrations are able to exert the cytostatic and cytological effect upon the lymphoid cells [5]. The pathogenetic mechanism has been defined at the molecular level with the indication of the specific deficient enzyme at the IDS (immunodeficiency states) series: the ADA one at one from the IDS and ПНФ or the transcobalamin II forms at the IDS one, having accompanied by the megaloblastic or hypoplastic anaemia. The defects at the ADA and ПНФ enzymes level are being broken the adenosine metabolism. These enzymes defects are being blocked the hypoxanthine production, so the adenosine, ADPH, and ATPH excessive accumulation is being taken its place just in the tissues, that is being blocked the T – cells maturation, by the unknown reasons. It is quite possible to use the metabolism enzymes of the purine nucleotides in the functional condition analysis of the immune status and also in the immune reaction adequacy [3]. Thus, it has been registered in our experiment that the dust and radiation factor is being brought to the functions disorder of the immune system cells, having changed their activity that is being accompanied by the activity lowering of the exchange enzymes of the purine nucleotides. The dysfunction state of the immune protection system is being appeared, that it is quite able to intensify the adaptative mechanisms disorders. The immunomodulatory quality of the Be phytopreparation has also been revealed.

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PHARMACOLOGICAL AND SURGICAL SYMPATHECTOMY OF VERTEBRAL ARTERIES

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With degenerative damages of cervical spine (CS), by force of closely linked with the second segment of vertebral arteries (VA), the symptoms of vertebro-basilar insufficiency (VBI) are often developed. Hypoperfusion in the bath of VA with spondylogenium damage is sometimes caused by their irritative or reflector spasm, even for lack of considerable

extravasal compression. The syndrome of cervical artery (CAS) is developing for correction of which many specialists follow the conservative medicine tactics.

We observed 52 patients with the CAS with the signs of VBI. Discirculation in the vertebral basilar system (VBS) mostly (77%) showed itself as transient ischemic attacks, other patients had chronic disease. All patients had radiography confirmation of cervical spine damage, with triplex scanning of VA one-sided and two-sided spasm came into light, with contrast angiography the extravasal compression of VA is not revealed.

All patients were made Procaine and spirit-Procaine blockades of the periarteric plexus of VA in the third segment with clinic – ultrasonic positive effect at 43 (82,7%). The duration of therapeutic effect of blockades was variated from 72 hours to 14 days. If Procaine is intolerated, we used 2% Lidocaine solution.

Taking into account pathogenetically founded high effectiveness of sympathectomy of VA, in order to liquidate their pathologic spasm 10 patients were made surgical denervation of the vertebral artery in the third segment under the endotracheal anesthesia. The conditions for making this operation were absents of the hemodynamic significant changes in the first segment of VA and positive effect with making spirit-Procaine blockades.

Under general anesthesia by poster lateral approach on the neck with the usage of magnifying optics nervous fibers of the periarterial plexus of the vertebral are excised and cut, without interference on the vessel itself.

Thanks to liquidation of efferent sympathetic influence on the vertebral artery, irritative or reflector vasoconstriction are fully disappeared, thereby blood flow in the third segment of the vertebral artery and other parts of VBS is improved. Destruction of sensitive fibers of vertebral nerve reduces the appearance of vegetalgetic symptom complex.

In long term observation from 2 to 8 months all operated patients had stable improvement with considerable reduction of manifestations of VBI and algetic component of the vertebral artery syndrome. The clinic improvement is correlated with data of ultrasonic research – on the side of operation the spasm of vertebral artery is fully disappeared, volumetric speed of blood flow is increased. More often we observed the reduction of vestibulocochlear dysfunction, pains in occiput and orbit. 5 patients had diminishing of arterial hypertonic with diminishing of system arterial tension on 20 mm/hg in average.

The usage of pharmacological and surgical sympathectomy of vertebral arteries with their spondylogenic spasm is the affective and little invasion method in the complex treatment of patients with vertebral basilar failure.

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ON THE HEMOMICROCIRCULATORY CHANNEL STRUCTURAL ORGANIZATION

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It has been done quite a number of attempts to single out the structural unit of the hemomicro circulatory channel (HMCC) in the last century. The central canal (e.g. Zweifach B.., 1939, 1961) and the module, including in a form of the arterioles and the venules with the capillaries network among them (e.g. Fung V.C. a. Zweifach B..W.., 1971) have been mentioned in the most frequently way.

The HMCC 10 dogs' mesenteries have been studied by me. Its total preparations, just after their fixation in the 10% formalin solution, have been stained by the aluminous hematoxylin, or they have been impregnated by the silver nitrate. The serial paraffin sections of the mesentery, having 7 mcm thickness, have been stained by the Van Gieson and Verhoeff method picrofuchsin, and 10 mcm thickness – by the hematoxylin. The microvessels sizes have been defined by means of the eyepiece – micrometer.

The mesenteries bands of the various sizes and forms (e.g. the HMCC interfascicular segments) are found among the great microvessels' fascicles (e.g. the I–st order arteriole, the IV–th – V–th order venule). The big branches (e.g. the arterial flows) of the great microvessels are being passed by the fascicles, and they are being divided the mesenteric segments into the microareas. The terminal arterioles and the collective venules are more often being moved away from their contour. The metabolic blocks (e.g. the precapillary – the capillaries – the post – capillary venule) are being formed their ramifications, together with which the HMCC typical modules are made up, and also the central canals and the anastomoses – venular, arteriolar, and arteriolovenular. The combined anastomoses are met, when one arteriole's branches take its part in the various anastomoses and modules formation. The central canal has its structure of the arteriolovenular semi – shunt, from which its branches are being moved away, where its main links: the metarteriole – is the terminal arteriole, having passed into the precapillary; the main artery – is the main capillary (not always), the postcapillary and the collective venules. The annular module is distinguished from the typical module by its configuration: the terminal arterioles are moving together, in one fascicle with the collective