complaints number decrease for the 87%, as a result of the complex non-medicamental and the non-pharmacological program application.

And the arterial pressure complete normalization has been noted at all the male and the female youngsters.

Thus, the rehabilitation arrangements complex with the diet calorie content restriction is being accompanied by the endo-toxicosis degree decrease, by the complaints number decrease, by the life quality improvement, and also by the hemodynamic parameters normalization. So, the risk absence for the patient's health is being dictated the possibility to be recommended the rehabilitation complex for the wide – scale introduction and the further realization into the public health practice.

#### The Resumes

1. The human body overweight mass (HBOM) presence, AH, the II increased, and also the lipid spectrum violations are the most convincing criteria for the complex endo-ecological rehabilitation carrying out.

2. The complex rehabilitation program with the hypo-high-calorie diet is the quite enough efficient approach for the multifactorial prophylaxis carrying out of the chronic non-infectious diseases.

#### References

1. Zborovskaya I.A., Bannikova M.V. The Human Organism Anti-Oxidant System, Its Value in the Metabolism. The Clinical Aspects // The RAMS Herald. – 1995. – № 6. –P. 53–60.

2. Ivanova I.L., Luchaninova V.N., Gnedenkova L.G. The Biological Liquids Researches at the Children with the Respiratory System Diseases // The Clinical and Laboratorial Diagnostics. – 1992. – № 7-8. –P. 45–47.

3. Makarova N.P., Konicheva I.N. The Endogenous Intoxication Syndrome at the Sepsis // The Anaesthesiology and the Critical Care Medicine.  $-1995. - N_{2}6. - P. 4-6.$ 

4. Malakhova M.Ya. The Endogeneous Intoxication Registration Method // The Manual for the Physicians. Saint – Petersburg, The MAPO Publications Collection. – 1995. – P. 33–50.

## LYMPHOID OR HAEMOPOIETIC ORGANS? Petrenko V.M. International Morphological Centre,

St.-Petersburg e-mail: deptanatomy@hotmail.com

More centure bone marrow was considered as part of bones, spleen was classified to alimentary system, thymus-to endocrine glands, lymph nodesto lymphatic system. The first International Histological Nomenclature contained division «Haemopoietic organs» - bone marrows, spleen, thymus. In new International Anatomical and Histological Terminologies all seats of haemopoiesis are united into lymphoid system by their immunopoetic function. This aggrigate can be to definite only as lymphoid apparatus. Bone marrow, aggregated and solitary lymphoid nodules are not independent organs. Red bone marrow and spleen are mixed haemopoietic organs by their structure with predominance of myeloid tissue, which form in connection with venous sinuses. Thymus and tonsils arise as congestion of epithelial and mesenchymal cells, later they transformate into lymphoepithelial organs. Lymph nodes arise as interweavings of lymphatic and blood vessels by means of invagination of blood vessels into the lymphatics, connective tissue between them transformates into lymphoid tissue. I think that it shoud be to discern «haemopoeitic organs», which are divided on myeloid-lymphoid (bone marrow, spleen) and lymphoid (thymus, lymph nodes, tonsils). Myeloid-lymphoid organs have row of important structural features - extralymphatic (parenchyma don't connects with lymphatic bed, it is related to thymus and tonsils too), sinusoidal (venous sinuses as paths away of blood cells), periarterial (by localization of lymphoid elements). Lymphoid organs contain high endothelium venules - paths of lymphocytes recirculation between primary and secondary lymphoid organs. Cortex of thymus looks like spleen on paths of lymphocytes influx in the organ.

# LOCAL INHIBITION OF BLOOD FLOW AS PRE-CONDITION OF FORMATION OF HAEMOPOIETIC SEAT

Petrenko V.M. International Morphological Centre, St.-Petersburg <u>e-mail: deptanatomy@hotmail.com</u>

Mechanic of anlage of haemopoietic organs is not described in literature. Anlage of lymph nodes takes place when blood vessels with their

The work is submitted to the International Scientific Conference «Science and Education in The Contemporary Russia», Moscow (Russia), 15–18 November, 2010, came to the editorial office on 14.10.2010.

16

more thick walls invaginate into increasing lumen of embryonic lymphatic collectors together with their endothelial wall. Intervascular connective tissue of invagination accumulates lymphocytes gradually. Increasing invagination twists and narrows the lumen of matrical lymphatic vessel, which is divided on three segments - afferent, efferent and intermediate (primary marginal sinus of anlage of lymph node). The invagination takes place on path of lymph flow and slow down it with division on two flows: direct lymph flow skirts the stromal anlage of lymph node into lenthening primary marginal sinus and undirect, trancfussional lymph flow penetrates the stromal anlage of lymph node where probably fragments of degenerating cells, tissues and organs settle including the partitions of lymphatic sacs and trunks. The fragments can induce migration of blood cells from blood microvessels of the invagination into its connective tissue, the stromal anlage of lymph node with its cleaning (macrophages) and transformation into lymphoid anlage of lymph node. Haemopoiesis in the (embryonic) liver takes place about sinusoides which are appeared due to that hepatic trabeculaes constrict and divide subintestinal vein or venae vitellinae and umbilicales. Haemopoiesis in the bones begins in foetuses of third month about venous sinuses which occur in this period. Intensive sedimentation of calcium in bones begins in foetuses of fourth month and red bone marrow becomes the centre of haemopoiesis in foetuses of fifth month. It is possible that walls of bones cavities limiting of dilatation of bone marrow and veins promote formation of sinusoides and entrance of blood cells into blood flow. Intensive proliferating epithelial anlages of thymus «wall up» blood microvessels. In embryos of 7-8 weeks the anlages «descend» from cervical region into thoracical cavity and find in solid surroundings of muscles, clavicles, ribs, sternum and heart. Such case limits outer growth of anlages of thymus, promotes their approach and junction, formation of blood thymus barrier. In this period mesenchyma of thymus is loosened and blood microvessels widen in connection with production of proteoglycans, blood and thymosin flow out are lightened that stimulates influx lymphocytes from blood into epithelial anlages of thymus. Anlage of spleen takes place in embryos of 5-6 weeks, in solid surroundings of intensive growing organs (liver, stomack, pancreas, mesonephros, gonada, kidney and suprarenal gland) external cuff of spleen instead of compact fibrose capsule which forms in foetuses. And compact mesenchyma in anlage of spleen limits widening of protocapillaries which is uneven. In embryos of 7-8 weeks stroma of spleen is loosened, protocap-

illaries transformate into venous sinuses. Besides, venous congestion spring up in anlage of spleen in connection with its removing from hepatic portal vein, its roots and tributaries. They are «cut off» by means of muscular coat of stomack and compact epithelial anlage of pancreas. But even in foetuses of 9-10 weeks intraorganic veins of spleen persist endothelial walls and thickening of its extraorgenic veins is very small. At last in embryos of 5-6 weeks turns of stomack about its lesser curvature are accompanied by twisting of dorsal mesogastrium, deformation and constriction of its blood vessels, inhibition of blood flow from spleen.

## THE IMPORT CONTRACTS FINANC-ING BY THE COMMERCIAL BANKS ON SECURITIES OF THE EXPORT CREDIT AGENCIES

Smirnov A.O. The Saint – Petersburg State Economic and Engineering University e-mail: smirnov@engec.ru

The contemporary stage of the Russian banking sector and its industry development, and also the world's credit and financially integration processes activization, are constantly being made the special great and the high demands to the banking management, for the purpose of its activity results high – level efficiency provision, including the international bank transactions carrying out sphere.

The Russian management subjects' external economic relations development is being characterized by the trade export – import relations volumes rise dynamics. So, the Russian foreign – trade turnover volume has been raised up in 1,4 time, and it has been made up 1,203 bln. dollars, for the period of the 2008–2009-es. So, the import and the export growth rates have been made up 10–15% for the quarter of the year that is being conditioned by the Russian various organizations international contracts number growth with the foreign partners and also by the Russian external economic relations development.

The efficient and the reliable instruments role of the international accounts and the settlements is quite being increased, and also the banks' role in their realization, under all these conditions. For all this, the commercial banks are being acted, as the mediators, the guarantors, and the subjects' calculations and the transactions in the Russian various organizations international trade realization with the foreign contractors.