МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ

М А Т Е Р І А Л И

106-ї підсумкової науково-практичної конференції
з міжнародною участю
професорсько-викладацького колективу
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Матеріали підсумкової 106-ї науково-практичної конференції з міжнародною участю професорсько-викладацького колективу Буковинського державного медичного університету (м. Чернівці, 03, 05, 10 лютого 2025 р.) – Чернівці: Медуніверситет, 2025. – 450 с. іл.

У збірнику представлені матеріали 106-ї науково-практичної конференції з міжнародною участю професорсько-викладацького колективу Буковинського державного медичного університету (м. Чернівці, 03, 05, 10 лютого 2025 р.) зі стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

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endotoxicosis, dopaminergic, and other signs of SS (severe sepsis) with the presence of generalized disorders. Exclusion criteria included patients on programmed hemodialysis, and mechanical ventilation, with contraindications to "volumetric load" from the respiratory and cardiovascular systems, and lack of response to loop diuretics.

The obtained research results were processed by the method of variation statistics according to Fisher (Student's test) using IBM PC (EXCEL program).

Calculation modifications of the paramecium test and kinetic parameters of MAM were selected as the method of endotoxicosis objectification.

Infusoria of Paramecium caudatum combines features of both a single cell and a complete mechanism. They can be considered simple receptor-effector systems that react to the components of endotoxicosis with a complex of physiological and biochemical changes. In the blood plasma, the components of endotoxicosis are also molecules with a high molecular weight (ae > 36 Å, MM >50,000-70,000 D), which practically do not pass through the glomerular filter and those that are freely filtered (ae < 24 Å, MM <30,000 D). By the way, molecules with approximately the same mass pass through the glomerular filter in different ways. It depends on the configuration, charge distribution, hydration, degree of mechanical adaptation, and nature of membrane damage.

Research results. The severity of endotoxicosis in SS is represented by the numbers of the plasma toxicity index and is consistent with the opinion of the authors who used other methods. The analysis of changes in the values of the urine toxicity indicator shows that it is functionally oriented to the indicator of the concentration of toxic substances (TS) in the blood plasma. The nature of TS elimination by the kidneys is a more informative indicator for clinical practice. Examination of its values under different research conditions demonstrates that different volume loads contribute to the elimination of TS by the kidneys. An important place in these studies is occupied by the clearance indicator - the ability of the virtual volume of plasma (the volume of extracellular fluid) to be completely cleared of the components of endotoxicosis per unit of time.

Conclusion. Thus, calculated modifications of the paramecium test and kinetic parameters of MAM testify to the detoxification capabilities of the kidneys to implement an infusion program of intensive therapy in severe sepsis.

Konovchuk V.M.

COMBINED USE OF SORBILACT AND L-ARGININE IN ENDOGENOUS INTOXICATION SYNDROME

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Introduction. Correction of the syndrome of endogenous intoxication (SEI) is an important pathogenetic method of treating patients with purulent-septic complications. Despite the use of extracorporeal detoxification methods, infusion therapy remains the basis of the basic program of complex intensive therapy of SEI. Among drugs with pronounced detoxification properties, an important place belongs to solutions containing polyatomic alcohols, in particular sorbilact. The drug has a wide range of positive characteristics, and its effectiveness has been clinically established. The use of L-arginine together with sorbilact hides a significant potential as an activator of the toxin-releasing function and a nephroprotector.

The aim of the study. To establish the effect of the combined use of sorbilact and L-arginine under the condition of standard therapy on the detoxification function of the kidneys and the level of MSI indicators.

Research material and methods. The study included patients with acute purulent surgical infections of various localization, caused by the association of aerobic gram-positive and gram-negative flora in the practice of the surgical department of abdominal, proctological, traumatological, otolaryngological, maxillofacial, obstetrical, and gynecological profiles after surgical remediation of the focus of infection with the subsequent development of secondary toxic autoaggression according to the CHI scale 20–60 points (moderate degree of intoxication).

Research results. The degree of endotoxicosis depends on the balance of the ratio between toxin formation and elimination of endotoxins, of course, taking into account the factors of intensive therapy. In general, the decrease in the concentration of toxic substances in the blood plasma, the concentration of MAM in the blood plasma, CHI, and the increase in the clearance of MAM by the end of the study indicate the appropriate quality of standard therapy.

The obtained data indicate that activation of the toxin-releasing function and nephroprotection by sorbilact is as follows. As a result of the absence of natural mechanisms for the reabsorption of polyhydric alcohols in the proximal parts of the nephrons, the drug carries out osmotic diuresis similar to mannitol and increases the glomerular filtration rate (GFR), the filtration fraction of MAM, reduces their reabsorption (about 80% of MAM is reabsorbed in the proximal parts of the nephrons with the participation of the peptidase system). Hence, sorbitol relieves the kidney tubules from performing this work, especially in the case of acute kidney damage during SEI, and increases the excretion of MAM, including those that have a vasoconstrictor effect, which, in turn, leads to a decrease in the total peripheral vascular resistance and an increase in GFR.

Thus, the addition of L-arginine leads to an increase in the effect of sorbilact on the toxin-releasing function of the kidneys according to the clearance characteristics of toxic substances.

It has been established that in the environment of pharmacotherapeutic agents, the use of the sorbilact-L-arginine complex activates the detoxification function of the kidneys (according to the clearance characteristics of toxic substances - 216%; medium-mass molecules - 244%) and significantly reduces endogenous intoxication (according to the cellular and humoral index of intoxication - 204%).

Conclusions. The use of the sorbilact-L-arginine complex is an effective means of influencing the course of the endogenous intoxication syndrome and the activity of the detoxification function of the kidneys by influencing the mechanisms of toxin elimination and the formation of toxemia.

Petrynych V.V.

FEATURES OF CHANGES LIPID PEROXIDATION AND OXIDATIVE MODIFICATION OF PROTEINS IN THE BLOOD AND LIVER OF ADULT RATS WITH DIFFERENT TYPES OF ACETYLATION IN POISONINGS MANGANESE CHLORIDE

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Introduction. The growing anthropogenic load on environmental objects in the form of compounds of a chemical, physical and biological nature is quite serious. Among man-made chemical pollutants, lead and its compounds occupy a special place, which are characterized by high toxicity and a high ability to accumulate both in ecosystems and in human and animal bodies. There is an opinion that variations in the response of different individuals to environmental factors may be related to the features of the genotype to the genetically programmed system of biotransformation, degradation and removal of xenobiotics.

The aim of the study. To explore indices of lipid peroxidation (LPO), antioxidant protection (AOP), and oxidative modification of proteins (OMP) in rat blood and liver under subacute exposure to $MnCl_2$, considering acetylation type and dose input, and to identify possible markers of susceptibility to the harmful effects of $MnCl_2$.

Material and methods. Experimental studies conducted on white conventional outbred mature male rats, which were divided into two groups: “fast” and “slow” acetylators by test with Amidopiryn. Intoxication modeled by intragastric administration $MnCl_2$ experimental animals at doses of 0,5 mg / kg (1/1000 DL50), 5 mg / kg (1/100 DL50) and 50 mg / kg (1/10 DL50) for 28 days. The control group of animals received tap water instead of $MnCl_2$ injections.

Results. Intoxication by manganese chloride in the “slow” and “fast” mature rats is accompanied by increased performance LPO, OMP and multidirectional changes AOP. It was found that more pronounced changes in LPO, AOP, and OMP levels in rat blood and liver were