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
БУКОВИНСЬКОГО ДЕРЖАВНОГО МЕДИЧНОГО УНІВЕРСИТЕТУ
03, 05, 10 лютого 2025 року

Конференція внесена до Реєстру заходів безперервного професійного розвитку, які проводитимуться у 2025 році №1005249

Чернівці – 2025

УДК 61(063)
М 34

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.

ISBN 978-617-519-135-4

the oliguric stage occurrence of the disease, or the developed picture of oliguria or oligoanuria. Usually, each patient underwent on average 2-3 sessions of PS in the routine discrete variant. During the session, up to 1000 ml of plasma was purified through a column with hemosorbent "CKH-4M", "CKN-1K". Sessions were repeated if necessary (unchanged condition, deterioration of the situation) every other day. Laboratory and toxicological controls were carried out (level of "medium" molecules, leukocyte intoxication index, level of specific electrical conductivity of plasma). No complications were recorded during the sessions.

Research results. In 3 cases, a high rate of daily increase of total bilirubin 80-100 μmol/l, urea – 8-10 mmol/l, and creatinine – 50-100 μmol/l was observed. The conducted PS sessions were ineffective: the condition of the patients progressively worsened with the onset of encephalopathy. This induced a more careful approach to selecting criteria for the appointment of the detoxification procedure in fulminant forms of leptospirosis. In all other patients, after the first PS session, the general condition improved: skin itching disappeared, encephalopathy phenomena decreased, and hemodynamics and breathing normalized. The indicator of total bilirubin before the detoxification operation was 256.3±32.2 μmol/l in the plastic container, after the separation of the plasma in the latter, this indicator was already 142.8±8 μmol/l (44% of bilirubin remains with erythrocytes). After sorption of the obtained plasma through the detoxification system of the column, this indicator was 68.5±14.2 μmol/l with the absorption capacity of the sorbent for bilirubin of 52%. On the first day after the session, total bilirubin was 253.7±29.7 μmol/l. On the second day after the PS session, an increase in bilirubinemia (10-15%) and nitrogenous wastes (7-8%) was observed in the blood of 85% of patients compared to the initial data before the detoxification session. At the same time, an increase in the concentration of these metabolites in urine was observed. However, the defining fact in this case, according to the authors, is the restoration of diuresis, which increased 2-2.5 times compared to the initial data. Before detoxification, the daily diuresis in patients was on average 876.0±262.0 ml, the next day – 1556±296.0 ml, and the second day – 1594.0±282.0 ml.

Conclusions. The result of PS sessions is a gradual decrease in the level of excess metabolites in the blood. No sharp fluctuations of the mentioned metabolites were observed in the blood. Restoration of daily diuresis strengthens the detoxification function of the kidneys. Stopping and reducing the level of accumulation of toxins in the blood prevents the onset of the anuric stage of acute renal failure. In addition, the sensitivity of the body to the action of diuretics is restored. A favorable factor is the avoidance of the need to connect sessions of extracorporeal hemodialysis, as a more radical and traumatic method of detoxification.

Andrushchak A.V.

DETERMINATION OF THE DETOXIFICATION OPPORTUNITIES OF THE KIDNEYS IN SEPSIS

Department of Anesthesiology and Resuscitation
Bukovinian State Medical University

Introduction. Factors of endogenous intoxication usually include microorganisms and their products of life, bacterial endo- and exotoxins, intermediate and final products of normal metabolism (in excessive concentrations), components of cellular, tissue, organ, and integrative regulatory systems (in pathologically high concentrations), products of distorted metabolism, toxic substances of intestinal origin. The composition of toxic substances also includes medium-mass molecules (MAM), which have sufficiently high biological activity. In particular, they have neurotoxic, cardiotoxic, hepatotoxic, and nephrotoxic activity, cause secondary immunodepression, etc.

The aim of the study. To investigate the detoxification function of the kidneys using the example of calculated modifications of the paramecium test and kinetic parameters of medium molecules in patients with sepsis under infusion load conditions.

Research material and methods. Studies include open, randomized, prospective, and controlled. The study design included inclusion, exclusion, and termination criteria. The inclusion criteria included patients with purulent-septic complications with the manifestation of severe

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

Department of Anesthesiology and Resuscitation
Bukovinian State Medical University

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).