



patients with LGM, regardless of the course and stage of development of the pathological process. In economically developed countries, such an important indicator as the 5-year overall survival of patients with LGM is 96.0%. Unfortunately, in Ukraine, it is approximately 75.0%. Important in the organization of effective chemotherapy of LGM is the use of a differential approach to treating different groups of patients, which are determined by the analysis of adverse prognostic factors. According to experts, the selection of adverse factors in the course of LGM with the subsequent distribution of patients to the appropriate prognostic groups is one of the priority strategic directions in the development of oncohematology. The use of this approach has a significant impact on the organization of the pharmaceutical supply for specialized health care facilities, which are known to be financed from public funds. Thus, in the middle of the XX century the first factors that could predict the course of the disease, the choice of treatment and the corresponding AA were the stage of the disease and the presence of symptoms of intoxication. Currently, the treatment strategy for patients with LGM has significant differences. The main groups of factors of adverse development of LGM specialists include: a set of characteristics that are due to the biology of the tumor, primarily the number of tumor cells, the level of their proliferative activity and propensity to apoptosis, the degree of expression of various antigens; features of tumor development, which are due to genetic factors; a set of factors that characterize the reactivity of the microenvironment (the composition of the reactive infiltrate, its quantitative and qualitative characteristics, the expression of activating antigens, etc.); indicators of the effectiveness of the interaction of the tumor with the cellular elements surrounding it (the level of expression of cytokines, chemokines, adhesion); a set of parameters that characterize the general condition of the natural and specific parts of the immune system of patients with LGM.

In conclusion, it can be argued that the organization of pharmaceutical support for patients with LGM is a problematic issue. An important area of research is the further search and study of prognostic factors that will allow not only to build the right tactics for the treatment of LGM but also to organize rational models of their pharmaceutical support with conditional healthcare resources.

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**EMOXYPINE PREVENTS STRUCTURAL CHANGES IN KIDNEYS IN RATS WITH  
ACUTE KIDNEY INJURY**

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Acute kidney injury (AKI) complicates the course of a large number of diseases, and therefore accompanies most cases with the background of existing hypoxia. A large arsenal of drugs is used to prevent and correct hypoxia of various origins, but only antihypoxants are drugs that can compensate energy deficiency and protect cells from damage by combining the properties of a membrane stabilizer and antioxidant. Particular attention in this regard is drawn to the drug emoxypine - a synthetic water-soluble derivative of 3-oxypyridine, having anti-stress, anticonvulsant, anxiolytic, sedative, angioprotective, antiplatelet, and cardioprotective activity.

The aim of the study was to study the effect of the antihypoxant emoxypine on the histological structure of rat kidneys in conditions of the experimental rhabdomyolysis-induced AKI.

The experiments were performed on 36 white laboratory male rats of reproductive age weighing 140-180 g, which were kept on a standard balanced diet with free access to water. Animals were divided into 3 groups (n=7): the I group consisted of intact animals; animals from the II group were once injected intramuscularly with 50% glycerol solution at a dose of 8 ml/kg (rhabdomyolysis-induced AKI model); the III group animals were injected intraperitoneally with emoxypine at a dose of 100 mg/kg 6 hours after the AKI modelling. Documentation of pathological processes was performed by computer morphometry of objects in histological specimens. For the statistical analysis SPSS 17.0 software was used.

In the kidneys of rats with rhabdomyolysis-induced AKI after 24 h of the experiment was found the obstruction by myoglobin and protein casts of the  $74 \pm 1.3\%$  of the lumens of the



convoluted tubules in the cortex and the collecting ducts of the medulla. Myoglobin casts significantly expanded diameters of tubules in the places of the localization. At the same time,  $53 \pm 1.8\%$  of epitheliocytes in the convoluted tubules were in a state of coagulation necrosis with compaction of cytoplasm,  $37 \pm 1.9\%$  of cells were with signs of granular and hydropic dystrophy to the degree of vacuolation, which is an unfavorable prognosis for recovery. Bowman's lumen in the glomeruli were dilated. When using emoxypine, the dystrophic process was less pronounced, the prevalence of reversible dystrophy of the proximal tubules of the kidneys was  $71 \pm .4\%$ , only some epitheliocytes were in a state of necrosis. The lumens of the tubules and collecting ducts contain myoglobin casts of characteristic red color, the concentration of which was uneven.

According to the results of histological examination, it was found that the use of emoxypine under the conditions of the rhabdomyolysis-induced AKI development has a protective effect on the kidney tissue of rats, which in combination with biochemical studies is an important criterion for verifying the nephroprotective effect of the drug.

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### **INFLUENCE OF ACE INHIBITORS AND CALCIUM CHANNEL BLOCKERS ON THE BLOOD CIRCULATION IN THE KIDNEY PARENCHYMA**

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Hemodynamic disturbances, occurring early or late as response to any pathological processes in the kidneys, are of great significance nowadays in the development of progressiveness of chronic kidneys disease (CKD). Dystrophic and scleral pathological processes that have more or less pronounced diffuse character, considered to acquire steady progression just due to stable hemodynamic changes. Kidney Doppler ultrasonography as relatively new ultrasound method of investigation of the organ bloodcirculation, occupied deserving place in cardiology, obstetrics and gynecology, vascular surgery and transplantology.

The aim of this abstract was to make better diagnostics and dynamic control of the quality of treatment of patients suffering from chronic kidney disease with arterial hypertension presence by means of color duplex Doppler ultrasonography investigation of the renal organ blood flow.

The study involved 55 men (41.98%) and 76 women (58.02%) aged 29-65 years (mean age  $46.50 \pm 2.25$  years) with the 5-10 year history of CKD and hypertension. All patients underwent Doppler ultrasound renal scanning to evaluate morphological changes of kidney structure and patterns of the renal vascularization. Investigation was carried out in the triplex regimen (B-mode ultrasound, colour duplex scanning, mapping, and spectral analysis of Doppler shift frequency) with measurement of the peak systolic velocity (Vs), end-diastolic velocity (Vd), time-averaged maximum blood flow rate (TAMX) in *a.interlobaris*, and calculation of the volume velocity (Vvol) and renal resistive index ( $RRI = (Vs - Vd) / Vs$ ). All values were calculated automatically.

Some patients (from 69 ) with AH during this period of time received lisinopril at a dose of 10 mg and amlodipine at a dose of 5 mg (39 patients) with the object to normalize AP and the remaining 35 patients received monotherapy with lisinopril 10 mg 1- 2 times a day (individually selected doses) and, if necessary, diuretics . During one-year follow-up, the stage of CKD changed to CKD stage III in 11 patients from the group under observation. The treatment of nephrological pathology carried out in accordance with the existing principles of therapy of the detected nephrological diseases. The indices of the renal blood flow against a background of 6-month treatment with the use of antihypertensive pathogenetic therapy combination of lisinopril and amlodipine, veritably decreased in many cases at the level of *a. segmentalis*. In patients with CP, all indices did not differ from normal values of almost healthy individuals ( $p < 0.05$ ), except index Vd. In patients with CKD, Vd ( $p < 0.05$ ) and IR ( $p < 0.05$ ) values probably decreased but did not differ from the normal values. And in DN group of patients with hypertension, the indices were torpedoed and did not respond to 6-month therapy of the combined use of lisinopril at a dose of 10 mg and amlodipine at a dose of 5 mg once a day. Patients, who were taking lisinopril as monotherapy for