hydrochloride 50 mg thrice a day orally, Group 2 - domperidone 10 mg thrice a day orally. The basic therapy included lifestyle modification, diet, metformin, antihypertensive agents/statins if necessary. The violation of motility disorders using the scale: 3 points – significant severity of symptoms; 2 points - moderate severity of symptoms, but affects the daily activities of the patient; 1 point - mild symptoms, the normal vital functions of the patient are not affected; 0 points - no symptoms. The average value of the severity of symptoms in every group was calculated. The following variables were assessed at the beginning of research and after 2 weeks treatment: relief of symptoms (marked/complete, moderate, slight, none or worse); QT interval on ECG; adverse events; general blood count; serum chemistry for hepatic and renal functions.

Clinical manifestations of motor disorders in patients with MS included heaviness and distension in the epigastrium after eating-100% of patients, rapid early satiety - 60%, nausea after eating- 26.7%, belching- 46.7%, constipation -33.3%. In the 1st group at the end of treatment, moderate to complete relief of symptoms was reported by 73.3% patients, whereas 26.7% reported slight improvement. In the 2d group moderate to complete relief of symptoms was reported by 60.0%, whereas 20.0% reported slight improvement, and 20.0%-no improvement. Clinical tolerability was excellent in 86.7% and good in 13.3% of 1st group whereas in the 2nd group figures were 73.3% versus 20.0%, respectively. 1 patient refused to continue treatment with domperidone. None of the1st group patients had any prolongation of QT on ECG, nor did any patient show any abnormality in analysis. In the 2st group there were 2 patients with prolongation of QT on ECG. No significant changes were found in general blood count; serum chemistry for hepatic and renal functions in both groups.

Thus, at the end of 2 weeks' treatment, itopride hydrochloride shows better effectiveness and tolerability in patients with metabolic syndrome and gastrointestinal motility disorders comparing with domperidone. Itopride hydrochloride is a combined D2 receptor antagonist and acetylcholinesterase inhibitor which does not have any adverse effect on the QT interval unlike other prokinetics. No side effects while taking the itopride hydrochloride allows for maintenance therapy in an outpatient setting.

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HEART FAILURE AND DIABETES MELLITUS: FOCUS ON CHANGES OF ERYTHROCYTE MEMBRANE MORPHOLOGY

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Blood rheological properties changes are one of the crucial points in the pathogenesis of most diseases, especially in case of comorbidity. Research aimed at investigation of possible structural changes of erythrocytes membranes (EM) in patients with chronic heart failure (CHF) and diabetes mellitus type 2 (DM). Methods of the optical physics reveal and objectify structural changes of EM, which can expand the spectrum of diagnostic methods of rheological disorders detection due to various pathological conditions.

60 patients with CHF (I group) and 55 patients with CHF with comorbid DM (II group) were included in the study. For objective assessment of functional state of EM laser polarimetry of the red cell suspension smear was applied.

Intensity distribution of histogram of Fourier spectrum of erythrocytes suspension smear had symmetrical “bell-like” appearance. Unlike this, intensity distribution of Fourier spectrum of erythrocytes suspension smear of patients of II group was uneven, and histogram transformed into asymmetric dependence. Revealed fact indicates growth of anisotropic component of EM, conditioned primarily by conformational changes of the protein structure of EM due to chronic hyperglycemia (activation of the peroxic oxidation of the biopolymers and lipids, protein molecules glycolization, and, as a result, change of the conformational and spatial orientation of the protein fibrils, including integrated, of the erythrocyte membrane), accompanied by worsening of morphological features of EM. Correlation analysis showed statistically significant direct

relationship between level of fasting glucose and anisotropy degree of the red blood cells suspension of patients of CHF and DM.

Thus, methods of the laser poliarimetry of the EM may be used for early diagnosis of structural changes of erythrocytes in patients with CHF and DM.

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EFFECT OF L-ARGININE ASPARTATE IN COMPLEX TREATMENT OF PATIENTS WITH CHRONIC CHOLECYSTITIS AND HYPOTHYROIDISM.

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It is known that changes in homeostasis in tissues sensitive to thyroid hormones include carbohydrate, fat and protein metabolism. In the presence of hypothyroidism in persons suffering from chronic cholecystitis, due to the formation of the syndrome of mutual burden, long course of exacerbation of chronic inflammatory pathology of the gallbladder is observed frequently. Various researchers have shown that patients with hepatobiliary dysfunction and hypothyroidism have an increase in cholestatic enzymes in the blood. Antihypoxic, membrane-stabilizing, cytoprotective, antioxidant, detoxifying activity of L-arginine aspartate are investigated. It also manifests itself as an active regulator of intermediate metabolism and energy supply processes, which are important properties that will be useful for patients with combined pathology of the thyroid gland and gallbladder.

The objective of the study was to investigate the effect of L-arginine aspartate on certain biochemical parameters of blood as a result of complex treatment of patients with chronic cholecystitis and hypothyroidism. 36 patients with hypothyroidism and concomitant chronic cholecystitis were examined. The examined patients were divided into two groups: the main group included 20 patients who, together with the standard treatment of hypothyroidism and chronic cholecystitis, were additionally prescribed a solution of L-arginine aspartate for oral use 5.0 ml 3 times a day with meals for 14 days. The comparison group consisted of 16 patients, representative by age and sex to the main group. The control group included 20 healthy people. The average age of patients in the main group was 50.4±3.1 years, the comparison group-49.4±2.9 years, the control group - 40.1±2.9 years. Blood was taken twice from the ulnar vein: before treatment and two weeks after it was started. As an anticoagulant used 5% solution of ethylenediaminetetraacetate disodium salt. Biochemical blood tests were performed on a biochemical analyzer "Accent-200" ("Cormay S.A.", Poland) using standard reagents and methods.The indicators of the biochemical study of blood that were studied included: total bilirubin and its fractions, uric acid, total protein and albumin, urea and creatinine, activity of aspartate aminotransferase, alanine aminotransferase, lactate dehydrogenase, γ-glutamyltranspeptidase.

It was found that the improvement of the overall therapeutic effect from the additional course of the L-arginine aspartate was observed in all patients of the main group. This manifested itself in an earlier improvement in well-being, a decrease in the intensity of pain and heaviness in the right hypochondrium, nausea and bitterness in the mouth, headache and general weakness.

In particular, in such patients, who used L-arginine aspartate during two weeks of treatment significantly decreased the activity of alanine aminotransferase by 36.0% ($p=0.02$), total lactate dehydrogenase - by 15.4% ($p=0.03$) and γ-glutamyltranspeptidase-by 30.3% ($p=0.03$), compared with those before treatment. For full correction of clinical manifestations of the disease and biochemical changes 14-day use of L-arginine aspartate is not enough, which requires repeated courses of the chosen treatment regimen until complete remission in the outpatient treatment.

Thus, it was found that additional to the main treatment regimen of L-arginine aspartate contributed to faster regression of clinical manifestations of chronic cholecystitis in patients with hypothyroidism, which occurred against the background of normalization of biochemical markers of cytolytic and cholestatic syndromes.