KL-1301-003
The unification of physical chemical and biological actions of spirits of glycerin and cholesterol in cell’s absorption of fatty acids: The singularity of pathogenesis of "metabolic pandemics"
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Abstract: According to phylogenetic theory of pathology, atherosclerosis is a syndrome of deficiency of essential polyene fatty acids in cells. The unfavorable impact of environment and derangement of biological function of trophology (function of nutrition) results in failure of transfer in the structure of lipoproteins and their active absorption by cells and metabolism of lipids and fatty acids. All these processes were formed billions years in the past at the autocrine (cell) level, in paracrine cenosis of cells and at the level of organism. The apparent derangements of trophology “highlight” the regular and metabolic limitations (hidden “defects”) which derange bioavailability of essential polyene fatty acids for cells by blocking cells’ active absorption. The processes of metabolism of nonpolar ethers of fatty acids with spirits of glycerin and cholesterol are impacted too. The biological function of intelligence applied the biological modes can eliminate this derangement through development of theory of pathogenesis of atherosclerosis and its effective prevention. The normalization of biological function of trophology and brining to conformity with capacities of organism advanced in phylogenesis are the only effective mode of prevention. This approach will decrease at once the prevalence of all "metabolic pandemics" in population. The spirit cholesterol will continue to occupy a fitting position in diagnostics of atherosclerosis on a par with spirit glycerin with identification of triglycerides. Both spirits are of equal value as diagnostic tests to detect the failure of transfer in the structure of lipoproteins and active receptor absorption of fatty acids by cells. The article proposes to unify on the basis of pathogenesis all "metabolic pandemics", diabetes mellitus included, into the section of clinical medicine and name it "pathology of fatty acids".
Key words: fatty acids, atherosclerosis, lipoproteins, intima of arteries, cholesterol, glycerin

KL-1301-011
The analysis of data of large study of cholesterol level in population: On the issue of reference values of cholesterol
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Abstract: The article deals with analysis of the results of large study of cholesterol level at the sampling of 52,075 patients. The median of values of common cholesterol exceeds 5.0 mmol/l in all groups of males older than 30-35 years and females older than 35-40 years. The percentage of patients with level of common cholesterol ≥6.2 mmol/l consisted 40.15 in the age group of 40-69 years. The issue of presentation of the results of laboratory analysis of common cholesterol (reference values as compared with recommended values) is discussed.
Key words: cholesterol, age reference limits, recommended value, population study

KL-1301-018
The dynamics of cardio-specified marker Troponin I (TN I) as a predictor of acute coronary syndrome under surgery of carotid endarterectomy
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The M.F. Vladimirsky Moscow oblast clinical research institute, Moscow
Abstract: The article deals with the data of dynamics of troponin I as a main marker of damage of myocardium under reconstructive surgery of inner carotid artery. The sampling for randomized prospective clinical examination included 227 patients. It is proved that the indicator of troponin I during the carotid endarterectomy can be used as a marker to evaluate severity of ischemic heart disease and as a predictor of possible development of acute coronary syndrome.
Key words: troponin I, marker, endarterectomy

KL-1301-022
The energetic metabolism in newborns in normal conditions and under development of disorders of adaptation in early postnatal period
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Abstract: The article deals with the prospective complex approach to laboratory analysis of energetic metabolism under states of newborns. The approach provides simultaneous detection of content of main energy substrates, activity of adenosinetriphosphatases and succinate dehydrogenases in umbilical blood, characterized by high sensitivity to hypoxia.

Key words: newborn, adenosinetriphosphatase

KL-1301-025
The content of apolipoproteins in blood m and parameters of lipid metabolism in population of North Polar regions and Southern regions of Caucasus

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Abstract: The study was carried out concerning the between content of apolipoproteins A and B in blood and lipid metabolism in population of North Polar regions and Southern regions of Caucasus. The differences of correlation relationships depending on concentration of apolipoproteins A and B in blood in population dwelling in territories climate geographic regions were detected.

Key words: apolipoproteins A, apolipoproteins B, common cholesterol, ether cholesterol, lipid transport system, Archangelsk, Polar regions, Southern regions of Caucasus, South Ossetia

KL-1301-028
The value of quantitative analysis of procalcitonine in diagnostics of septic complications in patients with autoimmune rheumatic diseases
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Abstract: The infections very often complicate the course of autoimmune rheumatic diseases. In diagnostic of septic complications in rheumatic patients the new biomarkers of infections can have a decisive importance. The procalcitonine test is one of them. The issue was to evaluate the diagnostic informativity of this test. The sample included 93 patients. The examination was applied to 65 patients with rheumatic diseases. Among them, 13 patients had bacterial infections. The group consisted of 33 patients with rheumatoid arthritis, 11 patients with systemic lupus erythematosus, 6 patients with systemic angiitis, and 15 patients with other rheumatic diseases. The comparative group included 27 patients of cardio-therapeutic profile and 8 of these patients had bacterial infections. The procalcitonine test was applied with quantitative electrochemiluminescent technique. In patients with rheumatoid arthritis the mean levels of procalcitonine test consisted 0.10±0.13 ng/ml; with systemic lupus erythematosus - 0.08±0.06 ng/ml; with systemic angiitis - 0.22±0.2 ng/ml; with other rheumatic diseases - 0.12±0.15 ng/ml; of cardio-therapeutic profile without infections - 0.08±0.06 ng/vl/ With threshold of procalcitonine test higher than 0.5 /ml the sensitivity to diagnostic of infections consisted of 58%, specificity - 94% in the group with rheumatic diseases. The procalcitonine test in case of no infection process with values higher than 0.5 ng/ml was detected in three patients. The evaluation of dependence of sensitivity and specificity for procalcitonine test and C-reactive protein the area under curve of procalcitonine test  was larger in patients with rheumatic diseases (0.85 against 0.79) and in patients of cardio-therapeutic profile (0.92 against 0.90). The quantitative procalcitonine test is the best technique to detect septic complications in rheumatic patients.

Key words: procalcitonine, amino acid, rheumatoid arthritis, autoimmune rheumatic diseases

KL-1301-034
The 8-OH-2-desoxiguanosin marker of oxidizing modification of DNA in patients with diffused dermatitis
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Abstract: The level of 8-OH-2-desoxiguanosin in blood serum of patients with severe chronic dermatitis was analyzed. It is demonstrated that in comparison with healthy patients in examined group of patients this indicator is increased mainly in patients with atopic dermatitis (up to 62%) and least of all with psoriasis (up to 25%) and bullous dermatitis (up to 18%). The statistically reliable differences of this indicator from control values under endogenic intoxication and different degree of severity of disease are determined. The detection of level of 8-OH-2-desoxiguanosin in blood serum is an informative technique of analysis to increase quality of laboratory monitoring of oxidizing stress.

Key words: 8-OH-2-desoxiguanosin, dermatitis, endogenic intoxication, oxidizing stress
KL-1301-036
The actual aspects of evaluation of proliferation and apoptosis in clinical laboratory diagnostic: A Review
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Abstract: The article deals with the issues of studying cell proliferation and apoptosis, relationship and conditionality of these two important physiologic processes. The main cytological markers of proliferation and apoptosis are analyzed, including the techniques of intravital non-invasive visualization of apoptosis. The value of these markers in clinical laboratory diagnostic and investigation is considered. The mechanisms of action of antineoplastic pharmaceuticals and issues of choosing the optimal scheme of treatment are analyzed.

Key words: proliferation, apoptosis, cytological markers

KL-1301-040
The relationship of AB0- and rhesus-phenotypes of erythrocytes with expression of intra-operational hemolysis in cardio-surgical patients
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Abstract: The study sampling included patients with ischemic heart disease with mild (70 patients) and marked (36 patients) hemolysis after coronary artery bypass grafting under artificial blood circulation. During post-operation period the content of free hemoglobin in blood plasma, AB0- and rhesus-phenotype of erythrocytes were evaluated. It is established that in patients with marked intra-operational hemolysis as compared with cases of mild hemolysis the phenotypes of erythrocytes B(III), AB(IV), ccDEE, ccDEe are found reliably more often and 0(I)-phenotype is found reliably more rare. The risk factor of marked intra-operational hemolysis is a verification of ccD(E/e)-phenotype of erythrocytes and in case of different rhesus-phenotypes - blood type B(III) or AB(IV).

Key words: antigens of erythrocytes, AB0, rhesus-phenotype, artificial blood circulation.

KL-1301-042
Prohepsidin in diagnostic of iron deficiency in patients with chronic cardiac failure and anemia
N.A. Makarova, I.I. Shaposhnik

Abstract: The sample for examination included 52 patients with chronic cardiac failure and 26 patients with anemia amongst. The expected increase of production of prohepsidin against the background of increased serum concentrations of anti-inflammatory cytokines was not detected. The tendency to decrease level of prohepsidin alongside with decrease of content of serum iron and ferritin in blood serum testified depletion of iron resources in organism.

Key words: chronic cardiac failure, anti-inflammatory cytokines, prohepsidin, iron deficiency, anemia

KL-1301-045
The verification possibilities of immunochips under low content of antibodies to core-antigen of virus of hepatitis C

Abstract: The detection of antibodies to Core-antigen of virus of hepatitis C in test-systems for solid-phase immune-enzyme analysis with low optical density can be a result not only of true availability of antibodies but an effect of nonspecific reaction of blood serum. The diagnostic possibilities of immunochips to be used in immune-enzyme analysis for verification of availability of markers of viral hepatitis C were investigated in conditions of low positive reaction of blood serum to core-antigen. It is established that immunochips and immunoblots have similar specificity concerning detection of antibodies to Core-antigen. At that, in immunochips antibodies to nonstructural antigens of virus of hepatitis C were additionally detected in more than 90% of samples.

Key words: core-antigen, hepatitis C, immunochips, antibody
KL-1301-049
The microbiocenosis of intestine and immune status of children of primary school age
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Abstract: The article deals with the study of species and quantitative structure of microbiocenosis of intestine and characteristics of immune status in children aged 8-10 years. In children with chronic tonsillitis, pharyngitis and bronchitis and with diseases of gastrointestinal tract (biliary dysfunction, chronic gastroduodenitis and gastritis) the microbe imbalance of various degree of manifestation was established which was prevailing in cases of children with pathology of gastrointestinal tract. The increase of quantity of opportunistic microflora induces the production of both immunoglobulins and cytotoxic lymphocytes and cells-natural killers.

Key words: microbiocenosis, intestine, immune status, children, primary school age

KL-1301-051
The characteristic of biocenosis of urogenital tract in women
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Abstract: The article deals with the study of characteristics of biocenosis of urogenital tract in women of reproductive age with using of "Femoflor" test. The scrapings of posterolateral wall of vagina were analyzed using the technique of real-time polymerase chain reaction using the reagents "Femoflor". The complex evaluation of urogenital biota identified three main types of biocenosis of vagina: type I - normocenosis (n=50 or 11.5%); type II - mild dysbiosis (n=88 or 21%); type III - marked dysbiosis (n=133 or 30.6%). In the structure of alterations of biocenosis of urogenital tract the main role play the anaerobic bacteria with involvement of candida, ureaplasma and mycoplasma.

Key words: biocenosis, normocenosis, "Femoflor" test

KL-1301-053
The kit of reagents for polymerase chain reaction diagnostic of infections caused by B.Pertussis, B.Parapertussis and B.Bronchiseptica
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The center of hygiene and epidemiology in city of Moscow, Moscow

Abstract: The effective treatment of whooping cough directly depends of early diagnostics. The polymerase chain reaction diagnostic is the most perspective diagnostic technique. The kit of reagents is developed to diagnose whooping cough, parapertussis and bronchosepticosis with polymerase chain reaction. The evaluation of its analytical characteristics was carried out. The sensitivity made 1x10^3 of genome equivalents per 1 ml of sample (the sorption technique of DNA extraction was applied) and 5x10^2 of genome equivalents per 1 ml (the precipitation technique of DNA extraction was used). The specificity of test in the framework of analyzed panel of strains and isolates of microorganisms made 100%. The diagnostic sensitivity of analysis exceeded the sensitivity of bacteriological analysis up to 20 times. The application of this kit of reagents permits to detect and to differentiate DNA of agent of whooping cough, parapertussis during one working day already at the beginning of catarrhal period of disease and up to 18th day from the moment of cough appearance. In perspective, this process creates an opportunity to apply timely the specific therapy. The specter of agents of acute respiratory diseases brining on acute prolonged cough in children who were directed to bacteriological analysis to confirm whooping cough is investigated.

Key words: B.Pertussis, polymerase chain reaction diagnostic, hooping cough, acute respiratory viral disease