



Here, we reviewed the available evidence for the clinical value of new diagnostic methods of ALD in various stages of its progress. In summary, we emphasize the following point: combination of MELD and METAVIR scoring systems is the most reliable diagnostic method for ALD patients.

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ASSESSMENT OF THE CLINICAL COURSE AND QUALITY OF LIFE IN PATIENT WITH COMORBID ASTHMA, COPD AND OBESITY

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The aim was to assess the symptoms, control level and quality of life in patients with coexisting bronchial asthma, COPD and obesity.

The study population consisted of 30 patients defined as asthma-COPD overlap (ACO) divided into obese (BMI \geq 30, n=15) and 15 non-obese patients (normal body mass index (BMI 18,5–24,9), n=8 and overweight (BMI<25–29,9), n=7) groups. The quality of life (QOL) of patients was monitored using Ukrainian version of the Short-form 36 (SF-36) questionnaire and St. George's Respiratory Questionnaire (SGRQ). Asthma-control test (ACT) and COPD Assessment Test (CAT) were evaluated.

Baseline demographic characteristics were not significantly different between groups. Most of the patients were in moderate and severe persistent group according to ACT questionnaire. Obese and overweight patients were found to have more severe airflow obstruction compared to normal BMI patients. Clinical manifestations of asthma and COPD were more significant in obese group. F-36 scores highly statistically significant correlated with SGRQ. Physical activity score was significantly lower (by 43,6%) in obese group as well as limitations in usual role activities due to physical problems (role-physical) (by 7,6%), social functioning (by 26%) and general mental health score (by 44%) with predisposition to depression and anxiety. Energy and fatigue (vitality) were found to be decreased in all participants, no difference was observed between groups. Overall quality of life was significantly lower in obese group according to the SGRQ.

Clinical manifestations of asthma and COPD overlap are more significant and overall quality of life is significantly lower in patients with obesity. The impact of symptoms on the patient's quality of life was demonstrated by changes in the physical and mental component of the questionnaire, limiting the social activity of a person and clearly reflected on the mental state of personality with a predisposition to depression and anxiety.

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GLOMERULAR FILTRATION RATE AND LIPIDS' METABOLISM DISORDERS IN HYPERTENSIVE PATIENTS DEPENDING ON ALDOSTERONE SYNTHASE GENE CYP11B2 (-344C/T) POLYMORPHISM

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The cytochrome 11B2 aldosterone synthase gene (CYP11B2) one of the possible encoding genes that relates to changes of aldosterone and blood pressure regulation.

The aim of the study is to analyse the lipids profile changes in arterial hypertensive patients (EAH) depending on glomerular filtration rate (GFR) and gene CYP11B2 (-344C/T) polymorphism.

One-hundred hypertensive patients with hypertensive-mediated target-organ damaging (2nd stage), moderate, high or very high cardiovascular risk were enrolled in the case-control study. Mean age 59.87 \pm 8.02 y.o. Chronic Kidney Disease (CKD) was diagnosed in 29 persons according to the National Kidney Foundation recommendations (2012) after glomerular filtration rate (GFR) decline <60 ml/min/1,73m² for \geq 3 months (measured by CKD-EPI equations). Lipids profile assessed by total cholesterol level (TC), triglycerides (TG) and low / high density level cholesterol (LDL-C, HDL-C) in serum. Also, calculated waist-hip ratio (WHR) for abdominal obesity



evaluation. Control group included 48 practically healthy persons of relevant age. Gene's nucleotide polymorphism CYP11B2 (-344C/T) was examined by polymerase chain reaction.

TC, LDL-C level in hypertensive patients do not relate directly to polymorphic variants of CYP11B2 (rs1799998) gene. Though, dyslipidemia is more intensively manifested in the T-allele carriers by elevation of TG and atherogenic index (AI) 22.61-56.21% ($p < 0.01$) as much, with lower HDL-C concentration – by 12.23% ($p = 0.043$) and 12.95% ($p = 0.039$), respectively, particularly in men by 25.84 ($p = 0.031$) and 35.76% ($p = 0.042$) higher than in women. CKD evolution in hypertensive patients follows by higher TC, TG and LDL-C that causes an atherogenic index increase (AI) by 13.54% ($p = 0.028$). Polymorphic site of CYP11B2 (rs1799998) gene is associated with TG and AI elevation in general population ($F = 13.98$ and $F = 13.25$; $p < 0.001$), both in women ($F = 22.99$ and $F = 15.21$; $p < 0.001$) and men particularly ($F = 5.09$; $p = 0.018$ and $F = 4.44$; $p = 0.027$) and reduced HDL-C content ($F = 5.28$; $p = 0.007$), especially in men ($F = 9.57$; $p = 0.001$). Furthermore, it associates with WHR increase ($F = 13.09$; $p = 0.003$), especially in the TT-genotype carriers' men ($F = 12.74$; $p < 0.001$).

Thus, polymorphic site of CYP11B2 (rs1799998) gene associates with dyslipidemia: TG and AI elevation, as well as WHR increase in general population, particularly in TT-genotype carriers' men. CKD in hypertensive patients is more related to lipids misbalance, than polymorphic site of CYP11B2 (rs1799998) gene.

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ALTERNATIVE PATHOGENIC APPROACH TO PREVENTION AND TREATMENT OF FLU AND ACUTE RESPIRATORY VIRAL INFECTIONS

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During pandemic coronavirus disease (COVID-19) a number of problems emerged concerning specific diagnostics and possible development of etiotropic and pathogenic treatment. At the same time, common etiopathogenic mechanisms are known to have a special place in occurrence and development of acute respiratory diseases.

The research deals with an alternative pathogenic approach to prevention and treatment of flu and acute respiratory viral infections (ARVI) based on the application of polarized, polychromatic, linear, incoherent, low-energy light (PILER-light), which does not contain ultraviolet and a considerable amount of infrared rays.

Objective of the work was to study changes of the protease-inhibitor system occurring under the action of polarized polychromatic incoherent light (PILER-light) in the body of mice infected by lethal and therapeutic (sub-lethal) doses of A/PR/8/34 (H1N1) flu virus.

A(H1N1/PR/8/34) flu virus was used in the study. The experiments were conducted on albino mice of Balb/c line with the body weight of 13–14 g with the device – a source of polarized polychromatic incoherent light (PILER-light) with the wave length of 400–2000 nm and power 2,4 joule/cm²•min. An active A A/PR/8/34(H1N1) flu virus was obtained, and its lethal dose for mice was determined.

The animals were divided into 4 groups, 10 mice each. The 1st group was infected with a lethal dose of flu A virus through the nose. The 2nd group received the same dose but underwent the course of treatment with PILER-light. The 3rd group was exposed to PILER-light only and the 4th group of mice received saline with diluted flu A virus in it.

The results of the study demonstrate that on the 5th day after being infected all the 100% of animals from the 1st group died. In the 2nd group the animals remained alive on the 14th day after infection. In the 3rd group, where animals were exposed to polarized light only, all of them were active and healthy. All the animals from the 4th group receiving saline remained alive as well. Light therapy of mice infected with a lethal dose of flu A virus (the 2nd group) determined that proteinase activity in the blood serum decreased sharply in comparison with healthy mice (the 3rd group) exposed to light, but it was considerably higher than in the 1st group of mice without treatment.