are multifactorial diseases, is accompanied by a cascade of metabolic disorders and is associated with worse control of glycemia, frequent and severe BA exacerbations. In the US study published in 2019 (Wu et al.) higher level of HgbA1c was associated with higher rates of asthma exacerbation. In 2020 Sarah a Hiles et al. pointed out that the blood eosinophils count in respiratory tract diseases is an important field of research, especially in the perspective of precision medicine, where biomarkers can be used for more individualized treatment. Furthermore, in those with early onset asthma, it is associated with increased eosinophilic inflammation, whereas in late onset, it correlates with predominantly non-T2 inflammation and lower nitric oxide (NO) (HartmutGrasemann, 2020). The feature of the immunological status of patients with BA in combination with DM type 2 is the reduction of IgE level along with the increase in the number of lymphocytic autoantibodies. Such pathogenetic changes as the reduction in the allergic and immunocomplex components of the chronic inflammation process may indicate switching to the autoimmune process, which is more aggressive (Yeryomenko G.V., 2019). A recent study (Katrien Eger, 2021) shows that the vast majority of patients with severe asthma respond favorably to anti–IL5 biologics after 2 years of treatment, however it is a proportion of nonresponders. There are no available clinical studies that would show the effectiveness of using glutathione or its precursors, such as S-adenosilmethionine (SAM), in improving clinical outcomes in patients with comorbid asthma, obesity and/or DM type 2. It was established that a reduced level of vitamin D (VD) is more significant among obese people, and it was detected a negative correlation between a concentration of 25(OH)D and the risk of diabetes mellitus. The low VD level was associated with increased asthma morbidity and susceptibility to air pollution. However, the results of some earlier clinical trials which added vitamin D to treatment were significantly disappointing in improving clinical outcomes in asthma. (Sonali Bose et al., Mario Castro et al., 2019)

Taking all into account, there is still a significant percentage of patients with BA resistant to treatment, especially in the case of comorbid pathology. Therefore, it is necessary to continue researches on pathological mechanisms of the mutually aggravating BA and DM type 2, the inflammatory endotyping, determination of genetic and epigenetic markers with the purpose of development new biological drugs and improvement of patients' life quality. Further studies should be conducted to determine the impact of gene polymorphism VDR and CD14 on the clinical course and treatment response of patients with comorbid asthma and DM type 2. In addition, further research is needed to understand how excessive production of reactive oxygen species (ROS) due to mitochondrial dysfunction in asthmatic patients with comorbid DM type 2 worsens the state of airway epithelial, causes changes in lung function and reduces the response to treatment.

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EFFECTS OF COMBINED THERAPY WITH ROSUVASTATIN AND POLYUNSATURATED OMEGA-3 FATTY ACIDS ON LIPOPROTEIN-ASSOCIATED PHOSPHOLIPASE A2

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Atherosclerotic cardiovascular disease is still the leading cause of morbidity and mortality worldwide despite great advances on diagnosis and treatment have been achieved in the past decades. Diabetic subjects have a two- to four fold increased risk of heart disease, but the mechanism through which this increased risk is mediated is not fully understood. Inflammatory processes have been increasingly recognized as a critical step in the pathogenesis of both diabetes and heart disease and may offer a biological link between the two diseases. One newly recognized inflammatory biomarker is lipoprotein-associated phospholipase A_2 (Lp-PLA_2), an enzyme that may influence atherogenesis and plaque rupture without altering the general immune response. Lp-PLA_2 is an enzyme excreting predominantly from atherosclerotic plaques by macrophages and neutrophils and then circulating in blood stream. Previously, clinical epidemiological studies showed that increased plasma level of Lp-PLA_2 was associated with increased risk of cardiovascular events such

as myocardial infarction and ischemic stroke, and Lp-PLA_2 inhibitors could significantly reduce the incident of cardiovascular events.

The aim of research was to study the levels of LP-PLA_2 in patients with chronic ischemic heart disease and type 2 diabetes mellitus and effects of the combined therapy with rosuvastatin and polyunsaturated omega-3 fattyacids (omega-3 PUFA) onLp-PLA2 level. The study included 64 patients with coronary heart disease (CHD) and type 2 diabetes mellitus, randomised into two groups: Group I (n=32) receiving rosuvastatin monotherapy (20 mg/d); and Group II (n=32) receiving combined therapy with rosuvastatin (10 mg/d) and omega-3 PUFA (2 g/d). We assess serum levels of LP-PLA_2 before and after treatment. At baseline, 12 weeks later, all participants underwent the serum levels of Lp-PLA2.

The results of the study showed that all patients with coronary heart disesase associated with type 2 diabetes mellitus diagnosed with elevated levels of LP-PLA2 in the blood (more than 200 ng/mL). In both groups, three-month therapy was associated with a significant decrease in Lp-PLA_2 level (-28 % and -35 % for monotherapy and combined therapy groups, respectively; p=0,001 for both comparisons).

Combined therapy with rosuvastatin and omega-3 PUFA decrease level of the content of LP-PLA_2 better than in group with monotherapy. The advantages of combination therapy provide a higher hypolipidemic effect and allow by reducing the dose of statins to eliminate their negative impact on the reduction of endogenous antioxidants. This effect reduces the risk of developing of cardio-vascular events in patients with chronic ischemic heart disease and type 2 diabetes mellitus.

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THE LEVEL OF KINESIOPHOBIA IN PATIENTS WITH HEART FAILURE

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Secondary prevention of coronary heart disease is aimed at reducing the risk of recurrent heart attack and is carried out in heart disease. Exercise in cardiac rehabilitation has been treated in an almost positive way in terms of mortality, morbidity, quality of life, and risk factors for people with coronary heart disease. However, the relationship between daily physical activity and risk factors of cardiac diseases is more uncertain for secondary prevention. The positive effect of cardiac rehabilitation is reduced by morbidity and mortality, both general and cardiovascular, including a positive effect on the functional state of patients, their weight, blood pressure, lipid profile, glycaemia, and insulin sensitivity, fibrinolytic activity. It has been observed that ectopic myocardial activity decreases, and anginal attacks decrease and oxygen consumption increases due to exercises. Other benefits include improvement of quality of life and decline of depression.

We have assessed the level of kinesiophobia due to cardiac function evaluated by clinical parameters in patients with cardiovascular disease and performed the analysis of clinical, laboratory, instrumental, 68 patients (27 women) aged 62,9 ± 6,35 years hospitalized in the acute coronary insufficiency unit. Kinesiophobia was assessed using the Tampa Scale of Kinesiophobia Heart (TSK-Heart) questionnaire. Rehabilitation programs are complex and need to be identified individually to achieve the established health benefits. The results of the survey indicate that a high level of kinesiophobia was observed in 20% of patients with coronary heart disease six months after the cardiac problem. From the point of view of secondary prevention, it is desirable to detect high levels of kinesiophobia in patients with coronary heart disease, as recognition may facilitate appropriate recommendations and treatment for such patients. It is necessary to emphasize the importance of using a psychometrically based questionnaire. This provides introductory support for TSK-SV Heart as a reliable, valid questionnaire for measuring kinesiophobia in patients with coronary heart disease

There are several important clinical variables that affect the result of rehabilitation associated with the high level of kinesiophobia. Patients with high levels of kinesiophobia had a significantly higher history of myocardial infarction ($p<0,05$), concomitant diabetes mellitus ($p<0,01$), and hypertension ($p<0,05$) compared to patients with low levels of kinesiophobia. In