

cytoplasm cambium cells the set of microfibrillar frames is determined. The appreciable part of volume of a cell is occupied with a nucleus of the oval form. A lobe of basal cells in a trachea and large bronchuses rather high. In distal departments the role of a cambium, in opinion of lines of authors, carries out cells Clara having the cubic or cylindrical form, posed on a basal membrane and beads keeping in cytoplasm. Series of these cells have not identified ultrastructural organization. Interestingly conducted with cells Clara in conditions of damage of an epithelium, losing a part reticulum endoplasmic and beads, they enter a transitive phase and further participate in neogenesis of an epithelium, subsequently being differentiated in ciliated cells. The mitotic index of activity in different departments of pneumatic pathes is various. And, the greatest activity shows at animals of 1-2 months. With augmentation of age the level of proliferative activity is reduced. Thus, it is revealed, that time of regenerating of an epithelium on the average and intralobular bronchuses occupies more appreciable time, than in large bronchuses. At young rats rate of regenerating of cells higher. At rats in the age of 12 and more months in epithelial surface bronchuses enough frequently meet involutive changes and a level of a proliferation lower.

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Effect of combined therapy with rosuvastatin on the clinical course and the structural and functional parameters of the heart in patients with concomitant cardiopulmonary pathology

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Summary: The article presents the results of a study of the clinical course and the dynamics of structural and functional cardiac parameters in 38 patients with chronic obstructive pulmonary disease (COPD) and coronary heart disease (CHD) due to the treatment, and supplemented with rosuvastatin therapy, which excludes receiving this drug. That the combination of rosuvastatin comprehensive therapy of COPD and coronary artery disease contributes to better control the symptoms of comorbid disease (reduces dyspnea, sputum, cough, frequency of anginal attacks), reduces the need for taking nitroglycerin (1.8 times), slows down the process of cardiac remodeling

Keywords: rosuvastatin, chronic obstructive pulmonary disease (COPD), coronary heart disease (CHD), comorbidity, clinical course, cardiac remodeling

Introduction: In modern medicine, one of the most pressing problems is the association of lesions of the lungs and heart, which, according to different authors, about 62% of the incidence of older patients[4,5,8]. Analysis of the scientific literature suggests that the combination of chronic

obstructive pulmonary disease (COPD) with coronary heart disease (CHD) greatly complicates the selection of long-term treatment programs. This may cause various problems, primarily with the purpose of medical treatment. As pointed T.H. Le Jemtel et.al., (2007), S.N. Avdeev, G.E. Ulyana (2007), G.M. Abdrakhmanova et al. (2010), Z.R. Aysanov (2011), S.I. Ovcharenko (2011) and a number of other authors, the therapy of patients with comorbidity should be early, comprehensive, efficient and require an individual approach, that is, taking into account the possible negative impact of drugs on the respiratory and cardiovascular system [1,2,3,6,7]. Unusually using «non-respiratory» drugs – statins by lungs physicians', due to its ability to influence systemic inflammation in COPD. The results of experimental studies and clinical observations made O.A. Tsvetkovej et al. (2011), showing a decrease in the progression of COPD and mortality from cardiovascular complications during treatment with statins [9].

This presents the clinical interest of further study the effectiveness of statins in treatment of patients with concomitant COPD and coronary artery disease.

Objective: To evaluate the comparative aspect of the effect of rosuvastatin in the treatment of COPD in conjunction with coronary artery disease on the clinical course of comorbid disease, structural and functional parameters of the heart.

Material and Methods: The study involved 38 patients with stage II COPD in combination with stable angina functional class II at the age of 50 to 60 years. The , average duration of COPD was $13,25 \pm 2,08$ years, ischemic heart disease $7,2 \pm 3,9$ years, smoking history $21,2 \pm 2,56$ pack/years. The main group (n=21) in addition to the combined therapy received an HMG-CoA reductase inhibitor rosuvastatin fourth generation ("Crestor", AstraZeneca, UK), 10 mg per day in a continuous mode in the control group (n=17) receiving the drug excluded. Diagnosis of COPD and coronary artery disease was performed according to the international program "Global Initiative for COPD (GOLD, 2010)," National Guidelines for Pneumology (2009), National Guidelines (2010). Basic therapy of COPD involves receiving Spiriva (18mg - 1 breath in the morning), home nebulizer treatment with a solution of 20-30 drops berodual and lazolvan 2ml 3 times a day, ischemic heart disease, antiplatelet agents, drugs nitroglycerin.

Comprehensive clinical and instrumental examination of patients was performed in the period of randomization: basic data and after 12 months of observation. Checking and correction of treatment were carried out 1 time per month. Assessed the severity of major respiratory (cough, sputum, shortness of breath), and cardiac complaints (frequency of angina attacks) in points, the need for additional reception of short-nitrate (number of tablets) and the behavior of some of the basic structural and functional parameters of the heart by echocardiography: end-diastolic (EDV) and end-systolic volumes (CSR), end-systolic (DAC) and end-diastolic (RIC) dimensions, ejection fraction (EF), the ratio of the maximum rates of early (E) and late filling (E/Amk, E/Atk) the right and left ventricles (RV and LV). Patient tolerance to physical load on the test with a 6-minute walk test (6 MWD). Initially on clinical and instrumental parameters, the basic therapy, patients of both groups were comparable. Statistical processing was carried out on the basis of a package of analyzes programs «Statistica 6.0». Differences were considered significant at $p < 0,05$.

Results and discussion: Found that both the basic therapy, and therapy, supplemented with rosuvastatin, a positive effect on the clinical course of COPD and coronary artery disease, which is reflected in the regression of clinical symptoms, but the dynamics of clinical parameters was more pronounced in the study group.

As can be seen from Table 1 to the completion phase of the study the severity of cough, sputum production, the frequency of angina attacks, the need for additional short-range reception of nitrates in the treatment group were significantly lower than in control patients also showed a trend to a decrease in shortness of breath.

The inclusion of rosuvastatin in the complex therapy of COPD, combined with coronary artery disease contributed to a more marked slowdown in the process of cardiac remodeling and a significant improvement in LV diastolic function, as well as the positive effect of RV diastolic function. For example, in the study group index E/Amk significantly increased to $1,34 \pm 0,06$ vs

1,25±0,02 of the control group (p<0,05). In the study group, compared with the control group were lower than the LV EDV and ESV (by 3,0 and 4,3%), EDV and ESV RV (respectively 3,7% and 6,6%) and higher rates left ventricular ejection fraction (4,9%), RV ejection fraction (3,7%), E/attack (10,1%), although not significantly.

Table 1

Dynamics of the major clinical parameters in groups of patients with COPD combined with coronary artery disease after 1 year of observation, depending on the therapy

(M ± m)

Index	groups	basic data	after 1 year	Δ (% basic data)
Cough (points)	control group (n=17)	2,46±0,14	2,02±0,10*	-17,9±1,22
	basic group (n=21)	2,42±0,10	1,78±0,05**#	-22,32±2,02
Sputum (points)	control group	2,62 ± 0,12	2,15±0,14*	-15,88±2,10
	basic group	2,68± 0,12	1,72±0,15**#	-23,83±1,64
Shortness of breath (points)	control group	2,62±0,12	2,10±0,10*	-14,12±1,72
	basic group	2,62±0,14	1,76±0,18**#	-20,18±1,92
The frequency of angina attacks (per month)	control group	8,48±1,10	4,82±0,29*	-34,4±4,12
	basic group	8,52±1,14	3,56±0,28***#	-56,52±4,72
Quantity of nitrates (in tablets)	control group	9,64±1,10	4,76 ±0,34*	-37,28±4,24
	basic group	9,54±1,14	3,44±0,22***#	-54,24±3,26

Note: The symbol * indicates significant differences between the groups, baseline and one year (* - p<0,05, ** - p<0,01, are marked with a # are significant differences between the groups (# - p <0,05, ## - p <0,01).

Improvement in functional status of LV in patients of the main group, apparently due to improved coronary blood flow, decrease ischemic changes and decreased left ventricular stiffness, which positively affected intracardiac hemodynamics.

In the group of patients treated with rosuvastatin in addition, the test results 6 MWD significantly improved by 128±14,8m vs 72,5±10,9m of the control group (p<0,05), consistent with the significant improvement in the clinical course of COPD and coronary artery disease and a marked improvement in the structural and functional cardiac parameters.

Conclusions: Thus, our studies suggest the feasibility of using rosuvastatin in the treatment of patients with COPD and coronary heart disease in order to slow the process of cardiac remodeling, improve the clinical course of comorbid disease and improve exercise tolerance.

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The benefit of the combined therapy by infliximab and methotrexate in patients with rheumatoid arthritis

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Abstracts. Rheumatoid arthritis is a chronic progressive immunoinflammatory disease which mainly affects joints and leads to disability frequently of young people. In all cases it is almost impossible to induce complete remission. That's why the treatment by basic anti-inflammatory drugs should be prescribed as early as it possible, during first six months since disease had been diagnosed. Comparative evaluation of the monotherapy by methotrexate, infliximab has shown that combination of basic anti-inflammatory drugs is more effective, such combined therapy decreases clinical-laboratory activity and rate of bone destruction.

Key words: rheumatoid arthritis, basic therapy infliximab, methotrexate

Rheumatoid arthritis (RA) is a wide spread chronic inflammatory disease which mainly affects joints, and the prevalence trembles from 0.5 to 1.0. According to the official statistics in 280 thousands (260 are adults and 20 are children and teens) of patients with RA had been registered in Russian Federation, 2002. Among all patients there are about 26 thousands had been revealed for the first time. Approximately 90% of patients will lose their ability to work and 1/3 of them become fully disabled persons through 10-15 years since the beginning of the disease. In Russian Federation the middle age of persons with RA who are disabled is about 48 and more than 25% of patients need in expensive drug and surgical management (1,4,5).

The aim of RA pharmacotherapy is to gain complete and if it's not possible - partial remission. There are a lot of remedies which can be used for RA treatment and all of them called basic anti-inflammatory drugs (BAID) because such drugs help to decrease the RA activity, to improve functional condition and to slow down destruction of the joints.

American college of rheumatologists recommends BAIDs for RA treatment and called BAIDs as "disease modifying anti-rheumatic drugs" which were reviewed in 2008. It is necessary to count the duration of RA (less than 6 months, 6-24 months, more than 24 months), RA activity and prognostic factors (functional restrictions – HAQ disability index, extra-joint manifestations – vasculitis, Sjogren's syndrome, lung-involvement, positive rheumatoid factor or cyclic citrulline protein antibodies, or/and erosive roentgenologically proved bone changes) while the prescribing of "first line" therapy drug.

Even the here and now, Methotrexate (MTX) is a "golden standard" among all BAIDs, it can be used for mono- or combined therapy with other BAIDs or even biological drugs. However as it has been told complete or partial remission is a rare result (1,2,5) that's why RA pharmacotherapy is one of the difficult problem of clinical medicine which stimulates pharmaceutical companies and doctors on a search of new approaches in the treatment (2,3).

According to the modern treatment protocols, to achieve this aim it is necessary to begin the treatment by BAIDs as early as it possible, the desirable time is first six months (2,3,6,7,8). During last years a group of biological genetically engineered drugs (BGED) has been developed. The inhibitors of tumor necrosis factor (TNF- α) are most important specimens of this group. TNF- α is a