Rheumatology, Examination of Temporary Disability and Quality of Medical Care named after E.E.Eichwald, St. Petersburg, Russian Federation

Background: At the moment, a highly relevant issue is the course of SARS-CoV-2 infection in patients with rheumatic pathology, especially, those receiving therapy with biological disease modifying antirheumatic drugs.

Objectives: of the current study to assess the prevalence and course of SARS-CoV-2 infection in patients receiving various biological disease modifying antirheumatic drugs.

Methods: to assess the severity of the course of SARS-CoV-2, discharged epiricrisis from hospitals or the conclusion of computed tomography were used. The average age of the patients ranged from 41.4+11.6 years. In the evaluated sample, 47 patients (49.47%) were males. Among the infected of SARS-CoV-2 were patients with rheumatoid arthritis - 45 (47.4%), spondyloarthritis - 39 (41.1%), systemic connective tissue diseases - 11 (11.5%).

Results: Since March 2020, among the 1319 patients with rheumatic diseases observed at the St. Petersburg Center of therapy biological disease modifying antirheumatic drugs, 95 patients (7.2%) had SARS-CoV-2 infection. In 57.9% (55 patients) there was a mild course of infection, in 35.8% of cases (34 patients) - a moderate course, in 6.3% (6 patients) - a severe course. Inpatient treatment was received by 29.5% (28 patients). A favorable outcome was noted in 95.8%, and a lethal outcome in 4.2%. The use of interleukin-6 inhibitors was required in 2.1% of patients (2) due to the development of a cytokine storm. The structure of the received biological therapy in the severity of the course is shown in Table 1.

Table 1. The structure of the received biological therapy in the severity of the course SARS-CoV-2 infection

	Mild course	CT-1 (<25%)	CT-2 (25-50%)	CT-3 (50-75%)	CT-4 (>75%)
TNF- α inhibitors, n (%)	30 (31,6)	11 (11,6)	7 (7,3)	3 (3,2)	0 (0,0)
anti B-cell therapy (rituximab), n (%)	2 (2,1)	1 (1,1)	2 (2,1)	1 (1,1)	2 (2,1)
Abatacept, n (%)	3 (3,2)	0 (0,0)	2 (2,1)	0 (0,0)	0 (0,0)
Janus kinase inhibitors, n (%)	5 (5,3)	1 (1,1)	1 (1,1)	0 (0,0)	0 (0,0)
Interleukin-6 inhibitors, n (%)	6 (6,3)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)
Interleukin-17 inhibitors, n (%)	8 (8,4)	2 (2,1)	2 (2,1)	0 (0,0)	0 (0,0)
Other, n (%)	1 (1,1)	4 (4,2)	1 (1,1)	0 (0,0)	0 (0,0)

Among 95 infected patients, who were observed in the center, 51 received therapy with TNF- α inhibitors (8.5% of the total number of patients receiving therapy), 8 - rituximab therapy (2.7%), 5 - abatacept (6.3%), 7 - Janus kinase inhibitors (0.9%), 6 - interleukin-6 inhibitors (9.2%), 12 - interleukin-17 inhibitors (14.1%), 6 patients treated with other drugs (10%).

Conclusion: Taking into account the SARS-CoV-2 pandemic, further study of the course of infection in patients with rheumatic diseases, including those receiving biological therapy, is required. More information is also needed on the safety and efficacy of vaccination in this patient population.

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Pain in rheumatic diseases, including fibromyalgia__

AB0713

EVALUATION OF THE EFFECTIVENESS OF LASER THERAPY IN THE TREATMENT OF RHEUMATOID ARTHRITIS

N. Zhuravleva¹, L. Karzakova², S. Kudryashov³, E. Petrova⁴. ¹Federal State Budgetary Educational Institution of Higher Education "The Chuvash State University named after I.N. Ulyanov"; Department of Internal Medicine, Cheboksary, Russian Federation; ²Federal State Budgetary Educational Institution of Higher Education "The Chuvash State University named after I.N. Ulyanov"; Department of Internal Medicine, Cheboksary, Russian Federation; ³Federal State Budgetary Educational Institution of Higher Education "The Chuvash State University named after I.N. Ulyanov"; Department of Internal Medicine, Cheboksary, Russian Federation; ⁴Federal State Budgetary Educational Institution of Higher Education "The Chuvash State University named after I.N. Ulyanov"; Department of Instrumental Diagnostics, Cheboksary, Russian Federation

Background: Despite the fact that the introduction of biological disease-modifying antirheumatic medicines (bDMARDs) and the early start of treatment for rheumatoid arthritis (RA) can effectively stop the inflammatory process in RA, a fairly large number of patients continue to experience joint pain [1]. It is assumed that in some cases, joint pain in patients with RA is not associated with the inflammation, so it requires consideration of the possibility of using alternative strategies for the treatment of RA.

Objectives: The aim of the research is to study the effectiveness of laser therapy in the treatment of RA.

Methods: 114 patients with RA aged from 32 to 53 years have been monitored for 6 months. There were 82 women (71.9 %) and 32 men (28.1%) among them. The patients were randomly divided into 2 groups. The first group of patients (57 people) received basic medical therapy with methotrexate 15 mg intramuscularly once a week and nonsteroidal anti-inflammatory medicines (NSAIDs) on demand. The dose of methotrexate was selected taking into account the disease activity index DAS 28. The second group of patients (57 people) received basic medical therapy with methotrexate 15 mg intramuscularly once a week and NSAIDs on demand. In addition, the cutaneous low-intensity laser irradiation of the joints was added along the projection of the joint gap in a pulse mode with a wavelength of 0.89 microns. The pulse frequency is 80-1500 Hz, the pulse power is 5W, the exposure time in the field is 1-2 minutes and the total radiation time per session is no more than 10 minutes [2]. The course of treatment consisted of 10 procedures (the device "Milta F-8 RD", Russia, Moscow). The course of laser therapy was repeated after 4 weeks. To assess clinical indicators, patients were examined using the SF-36 questionnaire before treatment and 6 months after the start of treatment.

Results: The survey after 6 months revealed the significant decrease in the severity of pain on the VAS from the initial average indicator 4.5 $\pm$ 0.2 to 3.69 $\pm$ 0.2 points (p<0.01) and morning stiffness from 60 $\pm$ 5 to 40.8 $\pm$ 4 minutes (p<0.01). In the first group, the dynamics of clinical indicators were not statistically significant: the intensity of pain decreased from 4.6 $\pm$ 0.2 to 4.2 $\pm$ 0.3 points (p>0.05) and the duration of morning stiffness reduced from 62 $\pm$ 7 to 58.6 $\pm$ 6 minutes (p>0.05). In the second group the decrease in the need for NSAIDs was observed in 21 patients, while in the first group the same was observed only in 10 patients (p_{x2} = 0.020).

Conclusion: Laser therapy in the treatment of patients with RA enabled to decrease the frequency of the need for NSAIDs and reduce morning stiffness. We recommend using laser therapy in patients with RA at the second radiological stage as an addition to basic therapy.

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AB0714

COMPARISON OF THE EFFECT OF SUBACROMIAL ADMINISTRATION OF HYALURONIC ACID AND PLATELET RICH PLASMA IN CASES OF DAMAGE TO THE TENDONS OF THE ROTATORS OF THE SHOULDER IN INDIVIDUALS OF DIFFERENT AGE GROUPS

V. Nesterenko^{1,1}, A. Karateev¹, E. Bialik¹, M. Makarov¹, S. Makarov¹, V. Bialik¹, M. Nurmukhametov¹, A. Chernikova¹. ¹V.A. Nasonova Research Institute of Rheumatology, Rheumatology, Moscow, Russian Federation

Background: Everyone has had shoulder pain at least once in their life. From 70 to 80% of chronic pain in the shoulder joint is associated with subacromial impingement syndrome. The use of non-steroidal anti-inflammatory drugs (NSAIDs) and glucocorticoids does not always meet the needs of patients and have a number of adverse reactions. Local administration of PRP and HA preparations is widely used for chronic shoulder pain. However, the question of the effectiveness of these drugs in patients of different ages has been insufficiently studied.

Objectives: To compare the efficacy of GLA and PRP in patients with chronic shoulder pain by age.

Methods: The study group included 100 patients, 46% women and 54% men, aged 51.5 $\pm$ 15.1, with chronic shoulder pain ($\geq$ 3 months) caused by damage to the tendons of the muscles of the shoulder rotators. Patients <45 years old accounted for 34%, patients $\geq$ 45 years old - 66%. All patients were randomly divided into 2 groups. Patients in group 1 received 2 consecutive subacromial injections of GLK, groups 2 - 3 consecutive subacromial injections of PRP. Pain dynamics were assessed using a 100-mm visual analogue scale (VAS),