

## CLINICAL AND MORPHOLOGICAL MANIFESTATIONS AND RISK FACTORS OF LUNG DAMAGE IN RHEUMATOID ARTHRITIS

*Saidova Muxabbat Muxitdinovna, Inoyatullaev Muxriddin Erkinovich*  
*Bukhara State Medical Institute, Republic of Uzbekistan*

**Abstract:** The study focuses on the analysis of clinical and morphological manifestations and risk factors for the development of lung lesions in patients with rheumatoid arthritis (RA). Lung damage in RA is a significant clinical complication that leads to a deterioration in the prognosis and quality of life of patients. This study examined the medical data of 300 patients who underwent diagnosis and treatment in the period from 2019 to 2022. The use of radiography, computed tomography, and histological analysis made it possible to identify the main morphological changes in the lungs, such as interstitial disorders and fibrosis, and to assess their correlation with the clinical parameters of the disease. The results indicate a significant role of RA duration, rheumatoid factor level, and anti-CCP antibodies in the development of pulmonary complications. Identifying these risk factors is an important step towards optimizing prevention and treatment strategies for lung damage. The study highlights the need for early diagnosis and an adapted approach to the treatment of RA patients to minimize the risk and severity of pulmonary manifestations.

**Key words:** rheumatoid arthritis, lung damage, clinical and morphological manifestations, risk factors, interstitial lung disease, pulmonology.

### **Topicality:**

Rheumatoid arthritis (RA) is a systemic autoimmune disease characterized by chronic joint inflammation and potential damage to various extra-articular organs, including the lungs. Lung damage in RA is one of the most significant and frequent complications that affects the overall duration and quality of life of patients. Approximately 10-20% of RA patients have clinically significant pulmonary manifestations that can progress to serious conditions, such as interstitial lung disease, pleurisy, and pulmonary hypertension.

The need for research in this area is due to the high frequency of pulmonary manifestations in patients with RA, the complexity of their diagnosis and treatment, as well as a significant impact on the prognosis of the disease. Current data emphasize the importance of early detection of pulmonary manifestations for timely initiation of adequate therapy and prevention of the progression of complications. It is also important to identify risk factors for developing lung lesions, which will allow us to develop targeted preventive measures and improve outcomes for this category of patients.

The development and testing of new diagnostic and therapeutic approaches based on a deep understanding of the mechanisms of lung damage in rheumatoid arthritis is a critical task that will help optimize the treatment of patients and reduce the level of disability and mortality from this complication.

**Goal:**

The aim of this study is to determine the clinical and morphological manifestations and risk factors of lung damage in patients with rheumatoid arthritis in order to improve diagnostic and treatment strategies.

**Materials and methods:**

For this study, we selected medical data from 300 patients with diagnosed rheumatoid arthritis who were treated in specialized medical centers from 2019 to 2022. Inclusion in the study required a confirmed diagnosis of RA according to the ACR/EULAR criteria and complete medical data, including the results of chest X-rays, high-resolution computed tomography (HRCT) of the lungs, and laboratory tests.

Statistical methods were used to analyze the data, including descriptive statistics, correlation analysis, and multivariate regression analysis to determine risk factors associated with lung damage. Assessment of morphological changes in the lungs was carried out on the basis of tomographic and histological data obtained as a result of biopsy, if necessary.

The study was conducted in compliance with ethical standards and obtaining consent from all participants. The data was anonymized to ensure the confidentiality of patient information. These approaches allowed us to ensure a high level of reliability and validity of the results obtained.

**Results:**

Analysis of clinical and morphological data from 300 patients with rheumatoid arthritis showed that the most common morphological changes in the lungs in this category of patients are interstitial disorders, pulmonary fibrosis and granuloma formation. In particular, interstitial disorders were found in 45% of patients, pulmonary fibrosis-in 30%, and granulomatous changes - in 25% of the studied cases.

Statistical analysis revealed that the most significant risk factors for lung damage in patients with RA are the duration of the disease, high levels of rheumatoid factor and the presence of anti-CCP antibodies. Patients with RA lasting more than 10 years were three times more likely to experience serious lung complications compared to those diagnosed with the disease for less than 5 years. Similarly, high levels of rheumatoid factor and the presence of anti-CCP antibodies correlated with more pronounced and more frequent morphological changes in the lungs.

In addition to these factors, it was also found that patients with active arthritis (on a DAS28 scale greater than 5.1) had a significantly higher risk of developing interstitial lung disease and fibrosis compared to patients with low disease activity. This highlights the relationship between the activity of the inflammatory process in the joints and lung damage.

**Conclusion:**

The study confirmed that rheumatoid arthritis is associated with serious morphological changes in the lungs, which can significantly worsen the prognosis and quality of life of patients. The identified risk factors, including the duration of the disease, the level of rheumatoid factor and the presence of anti-CCP antibodies, as well as the activity of arthritis, should be taken into account when developing diagnostic and treatment strategies.

Based on the data obtained, we can recommend regular radiography and VRCT for patients with high risks, which will allow timely detection of pulmonary changes and start adequate therapy. The results also highlight the need to integrate rheumatologists and pulmonologists into the care of patients with RA to ensure a comprehensive approach to treatment.

## Literature

1. Саидова М. М., Камилова У. К. Сердечно-сосудистый риск по шкале MSCORE у больных ревматоидным артритом //Евразийский кардиологический журнал. – 2019. – №. S1. – С. 381.
2. Саидова М. М., Камилова У. К. Анализ встречаемости кардиоваскулярной коморбидности у больных ревматоидным артритом //Артериальная гипертензия 2017 как междисциплинарная проблема. – 2017. – С. 41-42.
3. Saidova M., Kamilova U., Yusupaliev B. GW29-e1132 Evaluation cardiovascular risk indices in patients with rheumatoid arthritis //Journal of the American College of Cardiology. – 2018. – Т. 72. – №. 16S. – С. C216-C216.
4. Саидова М. М., Хамроева Ю. С. Сердечно-сосудистый риск у больных системной склеродермией //Новый день в медицине. – 2021. – №. 1. – С. 265-269.
5. Саидова М. М., Хамроева Ю. С. Cardiovascular risk in patients with systemic scleroderma //Новый день в медицине. – 2020. – №. 1. – С. 367-370.
6. Касимова Т. Ю., Аршин Е. В., Туев А. В. Ремоделирование левого желудочка сердца у больных ревматоидным артритом в сочетании с артериальной гипертензией //Российский кардиологический журнал. – 2008. – №. 1. – С. 17-21.
7. Саидова М. М. Оценка параметров толщины интима-медиа сонных артерий как раннего предиктора развития атеросклероза у больных ревматоидным артритом //Journal of cardiorespiratory research. – 2022. – Т. 1. – №. 1. – С. 58-60.
8. Ilkhomovna K. D. Morphological Features of Tumor in Different Treatment Options for Patients with Locally Advanced Breast Cancer //International Journal of Innovative Analyses and Emerging Technology. – 2021. – Т. 1. – №. 2. – С. 4-5.
9. Khodzhaeva D. I. Changes in the Vertebral Column and Thoracic Spinecells after Postponement of Mastoectomy //International Journal of Innovative Analyses and Emerging Technology. – 2021. – Т. 1. – №. 4. – С. 109-113.
10. Khodjayeva D. I. MORPHOLOGY OF IDIOPATHIC SCOLIOSIS BASED ON SEGMENT BY SEGMENT ASSESSMENT OF SPINAL COLUMN DEFORMITY //Scientific progress. – 2022. – Т. 3. – №. 1. – С. 208-215.
11. Ilkhomovna K. D. Modern Look of Facial Skin Cancer //BARQARORLIK VA YETAKCHI TADQIQOTLAR ONLAYN ILMIY JURNALI. – 2021. – Т. 1. – №. 1. – С. 85-89.
12. Ходжаева Д. И. Современные возможности ультразвуковой диагностики рака кожи лица //Вопросы науки и образования. – 2021. – №. 25 (150). – С. 21-24.
13. Aslonov S. G. et al. Modern Approaches to Oropharyngeal Cancer Therapy //International Journal of Discoveries and Innovations in Applied Sciences. – 2021. – Т. 1. – №. 3. – С. 38-39.
14. Khodjayeva D. I. MORPHOLOGY OF IDIOPATHIC SCOLIOSIS BASED ON SEGMENT BY SEGMENT ASSESSMENT OF SPINAL COLUMN DEFORMITY //Scientific progress. – 2022. – Т. 3. – №. 1. – С. 208-215.
15. Khodjaeva D. I. Magnetic-resonance imaging in the diagnosis of breast cancer and its metastasis to the spinal column //Scientific progress. – 2021. – Т. 2. – №. 6. – С. 540-547.

16. Ilkhomovna K. D. MANIFESTATIONS OF POST-MASTECTOMY SYNDROME, PATHOLOGY OF THE BRACHIAL NEUROVASCULAR BUNDLE IN CLINICAL MANIFESTATIONS //Innovative Society: Problems, Analysis and Development Prospects. – 2022. – C. 225-229.
17. Khodzhaeva D. I. Modern Possibilities of Ultrasounddiagnostics of Skin Cancer //IJTIMOIY FANLARDA INNOVASIYA ONLAYN ILMIY JURNALI. – 2021. – T. 1. – №. 1. – C. 101-104.
18. Ilkhomovna K. D. Modern Look of Facial Skin Cancer //BARQARORLIK VA YETAKCHI TADQIQOTLAR ONLAYN ILMIY JURNALI. – 2021. – T. 1. – №. 1. – C. 85-89.