

# Gastrointestinal Conditions in Rheumatoid Arthritis Patients

Toirov Doston Rustamovich  
Khusainova Munira Alisherovna  
Khaydarov Sanjar Nizamitdinovich  
Kamolova Diyora Djamshedovna  
Samarkand State Medical University

**Abstract:** Rheumatoid arthritis (RA) is a serious medical and social problem, characterised by a steadily progressive disorganisation of the connective tissue, based on profound immunopathological changes with autoaggressive features. RA ranks first in terms of prevalence among inflammatory diseases of the joints. The social significance of this disease is determined not only by its high prevalence, but also by the great material damage caused to society, the patient and his family due to the high incapacity and early onset of disability. Steady progression of the pathological process despite the use of modern therapeutic methods results not only in significant functional insufficiency of the locomotor apparatus but also in the shortening of the patients' life span by 4-10 years and the increase of the death rate which exceeds that of the general population. The prognosis of RA patients with systemic manifestations is particularly unfavorable: generalized vasculitis, rheumatoid nodules, lymphadenopathy, lung, heart, liver, kidney and other organs and systems are affected. Among the extra-articular manifestations of RA, gastrointestinal (GI) lesions are the least studied, although the most severe process, intestinal amyloidosis, is well known, occurring in 11% of patients and usually combined with amyloidosis of other internal organs.

**Key words:** Rheumatoid arthritis, inflammatory diseases, gastrointestinal

## Introduction

In patients with RA, abnormalities in motility and secretory function of the stomach, the development of chronic atrophic gastritis, which is three times more common in the general population, and the frequent occurrence of mucosal ulcers have been noted. The nature of these changes was considered by a number of researchers in the context of systemic rheumatoid inflammation, believing that atrophic gastritis is based on immune disorders. However, the question of the proportion of immune disorders in the stomach caused by the underlying disease on the one hand, and the damaging effects of medications that patients have to take continuously on the mucous membrane on the other, is still debatable. In recent literature, the main emphasis in the development of gastric disorders has been placed on drug-induced gastropathies. The pathogenesis of these gastropathies has not been fully elucidated and probably must not be considered in isolation from the processes that may be caused by the general immunopathological patterns characteristic of RA as a systemic disease. Moreover, it is currently postulated that any chronic gastritis is an immune pathology following a standard pattern: superficial gastritis - atrophic gastritis.

**Purpose Of The Study:** The aim of our work was to investigate the clinical manifestations as well as endoscopic and morphological changes in the gastric mucosa of RA patients in comparison with clinical and laboratory manifestations of joint disease.

## Materials And Methods

The following approach was used to diagnose gastroduodenal abnormalities in RA patients. The gastroenterological history was purposefully clarified. gastroenterological history, to identify risk groups of gastroduodenal disorders among RA patients patients risk groups of gastroduodenal complications development, the nature and duration of antirheumatic antirheumatic treatment (especially NSAIDs) The duration of antirheumatic treatment (especially NSAIDs), its effectiveness, the timing of dyspeptic disorders, allergic and other adverse reactions during treatment were determined. The timing of dyspeptic disorders, allergic and other adverse reactions during the treatment period was determined. During the objective examination, attention was paid to the condition of the oral cavity, as well as the temporomandibular joints, which may be accompanied by difficulty in chewing food and consequently

disturbed digestive processes. The presence of sensitive and painful areas in the epigastrium, right and left subcostals was determined, and one of the most frequent symptoms of gastric involvement in this category of patients - a feeling of overfilling the stomach after eating - was taken into account. Palpatory symptoms of pancreatic involvement were identified: Meio-Robson, Kach, Desjardins symptoms. Attention was paid to the liver, in particular to its size, consistency and painfulness of its lower edge, painfulness in the projection of the gallbladder. A total of 120 patients with RA were examined. The duration of the disease in 29 (24.1%) patients was less than 1 year, in 34 (28.3%) from 1 to 3 years, in 27 (22.6%) from 3 to 5 years, in 30 (25%) patients more than 5 years. Grade 1 activity was diagnosed in 37 (38.8%) patients, Grade 2 in 62 (51.6%), Grade 3 in 21 (17.6%) patients. Systemic manifestations of the disease (lymphadenopathy, renal pathology) occurred in 27 (22.5%) examined patients. Radiological changes of I stage were revealed in 36 (30%) patients, II - in 47 (39,2%), III - in 21 (17,5%), IV stage - in 16 (13,3%). Seropositive RA was detected in 87 (72.5%) cases.

Clinical symptoms of digestive tract involvement were observed in 107 (89.2%) patients, all of whom reported epigastric pain episodically at one time or another during the disease. Dyspeptic complaints were present in 105 (87.5%), of which the most frequent were heartburn in 47 (39.1%) and belching in 39 (32.5%). All 120 patients underwent endoscopy of the upper gastrointestinal tract. The obtained data were processed by the method of variation statistics. Arithmetic mean (M), standard deviation ( $\sigma$ ), criterion of reliability of differences between mean values (t), probability of differences (p) were calculated. Mathematical processing of the results was carried out on a personal computer using "Microsoft Excel-2007".

## Results And Discussion

In patients with antral gastritis, a persistent dull, nagging pain in the epigastrium was prominent, which was reported by all the patients. The only signs of dyspepsia were heartburn, belching and lack of appetite. In fundamental gastritis, pain was also persistent, but the range of dyspeptic disorders was wider: heartburn, belching, nausea, vomiting, feeling of congestion in the epigastrium. Pangastritis was accompanied by intense pain and the most severe dyspeptic disturbances. Peptic ulcer was detected in 15% of examined patients, in 9.2% it was located in the pyloroantral area, in 5.8% - in the fundal part of the stomach. In almost half of the patients duodenum was also involved in the process. Duodenitis developed in 63 patients, erosions of duodenal mucosa in 10 patients, onion ulcer in 10 patients. In 8 patients (6.6%) there was a combination of gastric and duodenal ulcer. Deformity of the duodenum bulb was found in 16 (13,3%) patients. The erosive lesions were usually haemorrhagic and localised in the antral region of the stomach, but in some patients they spread to the stomach and duodenal bulb. In all patients the erosions presented an endoscopic finding as they did not cause any specific clinical manifestation. Analyzing the dependence of endoscopic signs on the degree of RA activity, we noted that pangastritis correlated with disease activity to the greatest extent, being detected 6 times more frequently in high versus minimal RA activity ( $p < 0.002$ ).

In patients with systemic manifestations of the disease, pangastritis was almost 4 times more common than in patients without visceral disease. As the duration of RA generally increased, the number of patients with manifestations of chronic gastritis increased. The same can be said for gastric erosions and peptic ulcers. For example, gastric ulcer occurred almost 3 times more often in patients with disease duration exceeding 5 years, compared to those who had recently fallen ill. When studying the state of duodenal mucosa we noticed that duodenitis developed early, and the frequency of duodenal bulb deformity increased with increasing duration of the disease. It should be noted that the clinical picture of peptic ulcer disease in RA had peculiarities. If peptic ulcer was first diagnosed before the onset of RA, its clinic presentation lost its characteristic periodicity, seasonality, outlined symptomatology, in some patients there was a tendency to formation of combined ulcers. Patients with ulcerous lesions revealed against the background of RA had similar subjective manifestations. In other words, in patients both suffering from peptic ulcer disease in the past, and acquiring it against the background of the current RA, the symptomatology of ulcers turns out to be modified. Probably, it depends to some extent on the influence of anti-inflammatory drugs, moreover, the rate of erosive and ulcerative processes in gastrointestinal tract increases with increasing duration of the disease. In 40 of 120 patients, 80 gastrobiopsy specimens from the entral and fundamental regions of the stomach were studied. Endoscopic manifestations of chronic gastritis occurred in all patients, with

antral gastritis predominating. Histological examination of biopsy specimens revealed the following symptoms of chronic gastritis gastritis.

Diffuse lymphoplasmacytic infiltration was observed in the mucosal lamina in some cases, from the surface of the rollers to the muscularis lamina. Sometimes the infiltrate surrounded and squeezed the glands, sometimes completely displacing them. In other cases the infiltrate was scanty, and there was an overgrowth of either granulation or fibrous tissue in the mucous membrane plate. The connective tissue growth was predominantly from the bottom, from deep layers of the mucosa, i.e. from the area of glandular bed, and in some cases from the side of the rollers (predominantly from above). The entire mucosa was significantly thinned and the gastric mucosal infiltrate consisted of plasma cells, lymphocytes, macrophages, neutrophilic and eosinophilic leukocytes and tissue basophils. All these cells are associated with immune reactions, and this allows the involvement of immune mechanisms in the development and establishment of all types of chronic gastritis. The infiltration itself is consistent with the notion of immune inflammation. Morphologically, superficial (non-atrophic) gastritis occurred in 22 (53%) RA patients, most frequently in the antral region of the stomach (in 15 of 23 patients). Gastrobiopsy samples revealed inflammatory changes with predominance of marked cellular infiltration of superficial layer of intrinsic lamina of mucosa, both minor and abundant deposition of mucus on surface of membranous epithelium. In the deep part of the intrinsic lamina there was an overgrowth of connective tissue fibres. Vascular walls were sclerosed in 21 of 22 patients, there were small lymphocytic infiltrates in perivascular spaces. In 73.9% of cases inflammatory infiltrate spread to all sections of the intraluminal mucosa. Superficial gastritis was found in the fundal region in 50% of patients, less frequently than in the antral region. The association between fundamental gastritis and activity of rheumatoid process was traced: in this group of patients the greatest activity of RA was observed when the disease was more than 5 years old. In patients with pangastritis its superficial character was noted in 28,6% of cases. Morphological manifestations of active atrophic gastritis were characterized by the fact that on the background of sharply expressed infiltration of gastric mucosa by lymphocytes and plasmocytes in infiltrate and in covering epithelium there were large number of neutrophils. With increasing duration of the disease according to histological examination the number of patients with atrophic process of gastric mucosa increased. When comparing patients with systemic manifestations and with the joint form of the disease, it was found that in the first case chronic atrophic gastritis occurred 1.5 times more often than in the absence of systemic manifestations, and in the seropositive variant - 3 times more often than in seronegative. Vasculitis is known to underlie the development of systemic manifestations. One of the characteristic features of internal organs in RA is considered to be microcirculatory changes. However, the progression of sclerosis, and hence mucosal atrophy, may be influenced by a causal gastroduodenal disease. one way or another, gastroduodenitis may also play a role, which is not treated as a specific disease. does not receive any specific treatment. In these cases The process follows the standard pattern: superficial gastritis - atrophic gastritis. It is possible that the progression of chronic gastroduodenitis with atrophy of glandular apparatus may be caused by hormonal treatment and administration of NSAIDs play a role. Genesis of sclerotic and atrophic changes in gastric mucosa seems to include at least three causes: progression of RA proper, progression of chronic gastroduodenitis, the effect of NSAIDs and steroid hormones.

## Conclusion

Early development of gastritis, including severe forms (pangastritis), is noted in RA patients, a correlation with the activity of the process and the presence of systemic manifestations is revealed. Therefore, it can be assumed that chronic gastritis is primarily a manifestation of the rheumatoid process, which is considered as a systemic immunopathological disease. The presence of vasculitis and systemic disorganization of connective tissue in the gastric mucosa has been confirmed. Endoscopic and histological examination It allowed to characterize in detail the clinical and functional state of the upper digestive tract in RA, to scientifically substantiate the inclusion in the complex treatment of the disease of drugs that protect the mucous membrane from the aggressive effects of anti-inflammatory drugs and glucocorticosteroids, which can prevent the progression of gastrointestinal pathology and the development of severe complications arising from the treatment of rheumatoid arthritis.

## Literature

1. ALISHEROVNA, M. K., SHAXMAXMUDOVNA, S. Z., & TATLIBAYEVICH, Y. S. (2021). Effectiveness of Treatment of Chronic Heart Disease Insufficiency Depending on the Functional State of the Kidneys. *JournalNX*, 7(02), 240-333.
2. Alisherovna, K. M., Toshtemirovna, E. M. M., Duskobilovich, B. S., & Umirxanovna, K. G. (2022). DYSFUNCTION LEFT VENTRICULAR IN BRONCHIAL ASTHMA. *Spectrum Journal of Innovation, Reforms and Development*, 4, 216-221.
3. Alisherovna, K. M., Rustamovich, T. D., Baxtiyorovich, U. J., & Sherzodovna, M. D. (2022). KIDNEY DAMAGE IN CHRONIC HEART FAILURE. *Web of Scientist: International Scientific Research Journal*, 3(10), 744-752.
4. Zikiryayevna, S. G., Muxtorovna, E. M., Mamadiyarovich, S. A., & To'raqulovna, Q. S. (2022). KIDNEY DAMAGE IN RHEUMATOID ARTHRITIS: RELATIONSHIP WITH CARDIOVASCULAR RISK FACTORS. *Galaxy International Interdisciplinary Research Journal*, 10(5), 857-862.
5. Zikiryayevna, S. G., Muxtorovna, E. M., Mamadiyarovich, S. A., & Jurayevich, M. E. (2022). EVALUATION OF 12-WEEK URATE-REDUCING THERAPY WITH ALLOPURINOL IN COMBINATION WITH THE NONSTEROIDAL ANTI-INFLAMMATORY DRUG MELOXICAM IN PATIENTS WITH GOUT. *Galaxy International Interdisciplinary Research Journal*, 10(6), 140-148.
6. Palvanovna, K. Z., & Muxtorovna, E. M. (2022). THE PREVALENCE OF LESIONS OF THE DISTAL BRONCHIAL TREE (BRONCHIOLITIS) IN PATIENTS WITH RHEUMATOID ARTHRITIS. *Galaxy International Interdisciplinary Research Journal*, 10(5), 1044-1051.
7. Эргашева, М. Т. (2022). АРТЕРИАЛЬНАЯ ГИПЕРТЕНЗИЯ У ЖЕНЩИН В ПОСТМЕНОПАУЗЕ. *Журнал кардиореспираторных исследований*, (SI-2).
8. Alisherovna, K. M., Toshtemirovna, E. M. M., Totlibayevich, Y. S., & Xudoyberdiyevich, G. X. (2022). EFFECTIVENESS OF STATINS IN THE PREVENTION OF ISCHEMIC HEART DISEASE. *Web of Scientist: International Scientific Research Journal*, 3(10), 406-413.
9. Totlibayevich, Y. S., Alisherovna, K. M., Xudoyberdiyevich, G. X., & Toshtemirovna, E. M. M. (2022). Risk Factors for Kidney Damage in Rheumatoid Arthritis. *Texas Journal of Medical Science*, 13, 79-84.
10. Камолова, Д. Ж. (2022). STRUCTURAL-GEOMETRICAL CHANGES OF THE MYOCARDIUM AND THE PARTICULARITIES OF THE LEFT VENTRICLE OF THE HEART IN A PREGNANT WOMEN WITH A DIFFERENT TYPES OF ARTERIAL HYPERTENSION. *Журнал кардиореспираторных исследований*, 3(1).
11. Alisherovna, K. M., Toshtemirovna, E. M., Jamshedovna, K. D., & Xudoyberdiyevich, G. X. (2022). ASSESSMENT OF RENAL DYSFUNCTION IN PATIENTS WITH CHRONIC HEART FAILURE. *Web of Scientist: International Scientific Research Journal*, 3(5), 551-557.
12. Djamshedovna, K. D. (2021). ECHOCARDIOGRAPHIC SIGNS F CHF IN PATIENTS WITH ESSENTIAL HYPERTENSION. *Web of Scientist: International Scientific Research Journal*, 2(11), 192-196.
13. Rustamovich, T. D., Alisherovna, K. M., Baxtiyorovich, U. J., & Abdurakhmonovich, M. M. (2022). Painless Cardiac Ischemia in Women with Rheumatoid Arthritis. *Texas Journal of Medical Science*, 13, 95-98.
14. Rustamovich, T. D., & Khasanovich, B. D. (2022). CHARACTERISTICS OF HEART FUNCTIONAL DISORDERS IN GOUT DISEASE. *Galaxy International Interdisciplinary Research Journal*, 10(5), 551-558.
15. Xaydarova, Z. E. (2021). Vegetative changes, entropy and heart rate disorders in patients with myocardial infarction.
16. Nizamitdinovich, X. S., & Toshtemirovna, E. M. (2021). PATHOGENETIC RELATIONSHIP OF METABOLIC DISORDERS IN PATIENTS WITH ARTERIAL HYPERTENSION AND DIABETES TYPE 2. *Web of Scientist: International Scientific Research Journal*, 2(11), 156-160.

17. Yarmukhamedova, S. (2020). ASSESSMENT OF SIGNS OF DIASTOLIC DYSFUNCTION OF THE RIGHT VENTRICLE IN PATIENTS WITH ARTERIAL HYPERTENSION. *InterConf*.
18. Ярмухаммедова, С. (2020). ОЦЕНКА ПРИЗНАКОВ ДИАСТОЛИЧЕСКОЙ ДИСФУНКЦИИ ПРАВОГО ЖЕЛУДОЧКА У БОЛЬНЫХ С АРТЕРИАЛЬНОЙ ГИПЕРТОНИЕЙ. *Журнал кардиореспираторных исследований*, 1(2), 88-92.
19. Ярмухаммедова, С. Х., & Афмирова, Ш. А. (2022). Изменения диастолической функции правого желудочка при гипертонической болезни. *Science and Education*, 3(11), 270-280.
20. Nizamitdinovich, K. S., Alisherovna, K. M., Erkinovna, K. Z., & Davranovna, M. K. (2022). Heart Lesions in Rheumatological Diseases. *Texas Journal of Medical Science*, 13, 91-94.
21. Davranovna, M. K., Alisherovna, K. M., Erkinovna, K. Z., & Nizamitdinovich, K. S. (2022). Assessment of the Quality of Life of Patients with Coronary Heart Disease. *The Peerian Journal*, 11, 44-50.
22. Erkinovna, K. Z., Alisherovna, K. M., Davranovna, M. K., & Nizamitdinovich, K. S. (2022). Correction of Cytokine Imbalance in the Treatment of Stable Angina Pectoris. *The Peerian Journal*, 11, 64-70.