



**ESTIMATION OF CORRELATION BETWEEN QUALITY OF LIFE AND DURATION
OF DISEASE IN PATIENTS WITH EARLY RHEUMATOID ARTHRITIS**

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ABSTRACT

Being one of the rheumatologically diseases occurring with articular syndrome (AS), rheumatoid arthritis (RA) is characterized by damage to functionally important joints, which leads to disability of patients, especially among young and middle-aged people, which determines the social significance and urgency of the problem. The study of the quality of life in rheumatology is a highly informative method for assessing the condition of patients and allows you to get an idea of the impact of the disease on various spheres of human life. **The aim** of this study was to assess the quality of life (QOL) of patients with early RA depending on the duration of the disease based on the data of the SF-36 questionnaire in comparison with standardized indicators of population control. **Material and methods** The study included 68 patients aged 19 to 74 years with a reliable diagnosis of RA (meeting the EULAR / ACR criteria, 2010) with a disease duration of up to 1 year. General clinical, biochemical, and immunological blood tests were used to diagnose and determine the activity of RA disease. The impact of the disease on QOL was assessed using the SF-36 questionnaire. The QOL parameters of RA patients were assessed by the timing of the onset of the disease and compared with the standardized indicators of the population control group. Depending on the duration of the disease, the patients were divided into 4 groups: I group (16 patients) onset of the disease was 3 months, II group (17 patients) - the duration of RA was up to 6 months, III group (16 patients) consisted of patients with RA up to 9 months and the IV group (19 patients) included patients with the disease duration up to 12 months. **Results** Our data show that RA is accompanied by a decrease in physical health indicators, at the same time, the total psychological component of their health did not differ from the population one. In the general group of RA patients examined by us, lower values of the quality of life were noted than in the population control according to scales reflecting such mental components of health as vitality and social functioning; however, when comparing these indicators in individual age groups, these differences were completely leveled. In conclusion, it should be emphasized that our results demonstrate a low QOL of patients with RA, reflecting, first of all, changes in physical health. These data determine the social significance of RA and the need for a more in-depth study of the problem; QOL should also be taken into account when assessing the effectiveness of the treatment given to these patients.

KEYWORDS: *Early rheumatoid arthritis, disease duration, quality of life.*

INTRODUCTION

Rheumatoid arthritis (RA) is the most common inflammatory joint disease, the prevalence of which in the population is about 1%, and the economic losses from RA for society are comparable to coronary heart disease. After 20 years from the onset of the disease, approximately 90% of patients lose their ability to work to a greater or lesser extent, and a third become completely disabled. At the same time, in the first 3 years of illness, 37.5% of patients lose their ability to work, and after 5 years more than 50% of RA patients are no longer able to continue working. These facts indicate that in the first few years from the onset of the disease, the course of RA is especially aggressive.^[1]

Early RA is a conditionally isolated clinical and pathogenetic stage of the disease with a duration of active synovitis up to a year. The foreign literature also distinguishes very early RA ("very early RA") with a disease duration of less than 3 months and late early RA ("late early RA") - from 6 to 12 months of the course. Early RA is characterized by a predominance of exudative changes in the affected joints, a frequent atypical course, and a good response to treatment. If active treatment is prescribed at a very early stage of RA, remission can be achieved after 6 months among 47% of patients, and after a year - among 58.1% of patients.^[2] Thus, the early stage of RA is strategically important for treatment and at the same time the most difficult to diagnose.

The scientific research presented in the framework of the problem of early arthritis is devoted primarily to the solution of two closely related issues. Firstly, the possibilities of establishing a reliable diagnosis are being studied, and secondly, approaches to prescribing the optimal therapy option for a given period of the disease are being worked out.^[3]

However, the complexity of treatment approaches based on basic therapy plays an important role in solving this problem. Early complex therapy of RA can improve the effectiveness of treatment, slow down the progression of erosive arthritis and delay the disability of patients, increasing their quality of life (QOL). The study of QOL in rheumatology is a highly informative method for assessing the condition of patients and allows you to get an idea of the impact of the disease on various spheres of human life. To objectify the concept of QOL and expand the doctor's understanding of the patient's condition as a whole, general and specific questionnaires are successfully used in domestic and international practice. One of the most widely used general questionnaires is the Short Form Medical Outcomes Study (SF-36).^[4]

The aim of this study is to assess the QOL of patients with RA based on the data of the SF-36 questionnaire on the duration of the disease in comparison with standardized indicators of population control.

Material and methods The study included 68 RA patients (meeting the EULAR / ACR criteria, 2010) aged 19 to 74 years (mean age 44.2 ± 3.2 years) with a disease duration of up to 1 year (6 to 52 weeks) who underwent inpatient treatment in the departments of cardio-rheumatology, rheumatology and were registered at the arthrological department of the TMA multidisciplinary clinic for the period 2019 - 2020. By sex, the patients were distributed as follows: 63 women (93%) and 5 men (7%) (F: M = 12: 1). The average duration of the disease was 8.6 ± 0.7 months.

Depending on the duration of the disease, the patients were divided into 4 groups: I group (16 patients) onset of the disease was 3 months, II group (17 patients) - the duration of RA was up to 6 months, III group (16 patients) consisted of patients with RA up to 9 months And the IV group (19 patients) included patients with the disease duration up to 12 months.

A comparative assessment of the effect of various durations of the disease on the QOL indicators of RA after 12 months of dynamic observation of patients was carried out.

The impact of the disease on QOL was assessed using the SF-36 questionnaire. QOL parameters of RA patients were compared with standardized indicators of the population control group.

RESULTS

When analyzing the SF-36 scales, the total physical component of health in RA patients was significantly lower than in the population ($p < 0.00001$). The total value of the psychological component of their health did not differ from the standardized population indicator. In RA, indicators characterizing physical health were reduced to the greatest extent. Thus, according to the scales of physical functioning, role physical functioning, pain intensity and general health, the QOL indicators were 5–8 points lower than in the population ($p < 0.0001$). This indicated that RA significantly limits the physical activity of patients, the ability to endure physical activity and perform daily activities, the patients had a lower resistance to the disease. The average standardized indicators of viability ($p < 0.0005$) and social functioning ($p < 0.02$) were also lower than the population indicators and indicated a limitation of vital activity and the level of social contacts. Role emotional functioning practically did not differ from the average population values. On the contrary, the mean value on the psychological health scale in RA patients is population-based, but the differences were not statistically significant.

Thus, the QOL of patients with RA was significantly reduced due to chronic pain, functional limitations, and psychological problems. At the same time, the total psychological component of health in RA patients does not differ from the population component. When carrying out a comparative analysis in different terms of RA, we found that patients with RA of I group in comparison with the population group had lower indices of scales of physical functioning ($p = 0.005$), role physical functioning ($p < 0.00001$), pain intensity ($p < 0.00001$) and social functioning ($p = 0.0033$), which indicated the limitation of physical and social activity in patients with RA. In II and III groups, significant differences were observed only on three scales - physical functioning ($p = 0.001$ and $p = 0.001$, respectively), role physical functioning ($p = 0.0002$ and $p = 0.03$) and pain intensity ($p = 0, 00001$ and $p = 0.01$), which indicated a decrease in the physical health of the patients.

Patients of the IV group in comparison with the corresponding control had a significant decrease in the scales of physical functioning ($p = 0.0004$) and general health ($p = 0.0044$). These indicators make it possible to characterize the state of health of RA patients as unsatisfactory and to suggest that they have less resistance to the disease. All groups showed no differences in any of the indicators characterizing psychological health. Only in IV group we found lower values of psychological health than in the population on the scale of social functioning, which was also demonstrated when comparing the general group of RA patients with population control.

DISCUSSION

QOL indicators in our patients are significantly inferior to population ones. They suffer mainly from physical health, to a lesser extent from their psychological state, and reduced social adaptation. The study included only patients with a reliable diagnosis of RA. All our patients were examined on an outpatient and inpatient basis. As in a number of foreign works devoted to the study of QOL, our study used the general questionnaire SF-36, which makes it possible to assess the QOL not only of patients, but also in the population.^[5] However, this work did not analyze the effect of comorbid diseases on the QOL of RA patients, although their presence may contribute to a decrease in QOL.^[6]

Our data show that early RA is accompanied by a decrease in physical health indicators, at the same time, the total psychological component of their health did not differ from the population one. Most of these studies have shown results similar to ours. Thus, colleagues from foreign countries^[7] report that in the absence of changes in the psychological sphere in RA patients, the total physical component of health suffered significantly in comparison with the population norm. There were no differences in the mental component of health in RA in the population in the work of foreign authors^[8], although the physical component of the health of their patients caused a significant decrease in QOL in comparison with the population. In the general group of RA patients we examined, lower QOL values were noted than in the population control according to scales reflecting such mental health components as vitality and social functioning. In conclusion, it should be emphasized that our results demonstrate a low QOL of patients with RA, reflecting primarily changes in physical health.^[9,10] These data determine the social significance of RA and the need for a more in-depth study of the problem; QOL should also be taken into account when assessing the effectiveness of the treatment given to these patients.

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