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Features of the Psychoemotional Status of Patients with Rheumatoid Arthritis

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Abstract: It has been established that the level of quality of life in patients with rheumatoid arthritis decreases regardless of the ongoing drug therapy. At the same time, the level of depression of patients with rheumatoid arthritis did not depend on the received drug therapy, activity, stage, degree of functional insufficiency of the joints, which confirms the idea of rheumatoid arthritis as a classic variant of psychosomatic disease. Among the trigger factors for the development of MS in recent years, increasing importance has been attached to stress provoking (family problems, office and financial difficulties), but to date there is an extremely limited number of studies devoted to this problem. RA limits the functional capabilities of patients in everyday and professional activities, worsening the psycho-emotional state. Chronic acute respiratory infections are considered as an independent constant stress factor that causes the need for the patient to adapt to life in conditions of illness and its consequences, since various aspects of life, work, economic status, family and social relationships, psychological status are affected It has been shown that patients with rheumatoid arthritis who took methotrexate + infliximab assess their condition better than patients who received methotrexate monotherapy. This is largely due to the severity and speed of the onset of the anti-inflammatory effect of biological therapy.

Keywords: psychoemotional status, rheumatoid arthritis, anxiety, depression, quality of life, methotrexate, infliximab.

Introduction

Rheumatoid arthritis (RA) is an autoimmune rheumatic disease of unknown etiology characterized by the development of chronic erosive arthritis (synovitis) and systemic inflammatory damage to internal organs. Rheumatic diseases (RH) occupy one of the first places in terms of the degree of negative consequences for the health of the country's population. The relevance of the study of RH is determined by their constantly increasing prevalence in all age groups, a tendency to chronization and steady progression, leading to a decrease in capacity, early disability of patients and their increase in the population. The prevalence of RA is on average 1% (from 0.6% to 1.4%). The peak incidence occurs in the age period of 40-50 years. Women get sick 2-5 times more often than men. In recent years, stress-provoking factors (family problems, office and financial difficulties) have become increasingly important among the trigger factors for the development of RH, but to date there is an extremely limited number of studies devoted to this problem. RA limits the functional capabilities of patients in everyday and professional activities, worsening the psycho-emotional state. Chronic RH is considered as an independent constant stress factor that causes the need for the patient to adapt to life in the conditions of the disease and its consequences, since various aspects of life, work, economic situation, family and social relationships, psychological status are affected.

The social significance of RA is due to various reasons: 33% of patients working at the time of the onset of the disease are forced to leave work for the next 5 years; the mortality rate of RA patients is 2.5 times higher compared to persons of the same sex and age, not suffering from this disease; RA

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reduces the life expectancy of patients by 5-10 years; survival in RA is comparable to the disease Hodgkin's disease, diabetes mellitus, stroke. Medical treatment of RA lasts for many years, sometimes accompanied by side effects, including changes in appearance, physical discomfort, sleep disorders, emotional lability. Premorbid personality traits allow some patients to calmly adapt to new living conditions, while others contribute to the development of a number of psychopathological conditions that require not only psychological, but also medical correction. Depressive disorders occurring behind the mask of the underlying disease are also not uncommon (somatized depressions), and therefore not always recognized in a timely manner. Diagnosis of depression in RA is difficult, since some of its manifestations "coincide" with the symptoms of the disease: chronic fatigue, weight loss, insomnia, loss of appetite. In this regard, additional methods of examination of patients are needed, allowing timely identification of the nature and severity of depressive disorders in patients with RA. A vicious circle is formed: pain syndrome caused by the excitation of receptors in the joint and adjacent muscles leads to a reflex painful state of tension. Emotionally increased muscle tone of skeletal muscles or trunk causes increased sensorimotor excitability. Emotionally stressful events can provoke an exacerbation of the disease. Mental stress includes, first of all, a crisis in interpersonal relationships, the death of loved ones, problems of personal authority and marriage. The external cause causes internal intense aggression, which is suppressed by the patient. The resolution of aggressive impulses is a combination of increased self-control and "charitable" tyranny over others. Thus, mothers suffering from RA tend to strictly control almost all motor manifestations in their children. In RA patients, along with damage to the musculoskeletal system and involvement in the pathological process polymorphic clinical manifestations of neurotic level with predominance of affective and asthenic disorders are observed in various body systems. This makes it necessary to carry out a complex of therapeutic and rehabilitation measures, including, along with traditional treatment, psychopharmacological and psychotherapy. However, in practice, this aspect is not given due attention due to the focus primarily on the treatment of RA itself, in order to slow the progression of the disease and achieve clinical and laboratory remission. Psychotherapy and psychopharmacotherapy are used extremely rarely and are not considered as mandatory components in the treatment of RA.

PURPOSE OF THE STUDY: To study the features of the psychoemotional status of RA patients.

MATERIALS AND METHODS

36 patients were examined: 27 women and 9 men, with a criterion-based diagnosis of RA. The patients were divided into two groups. Group I included 13 women and 5 men (average age of women – 56.5±10.1 years, men – 54.8±15.1 years). The duration of RA disease varied from 6 months to 24 years (the average duration was 4.6 years). Seropositivity was detected in 14 patients (77.8%). Patients with I (33.3%) and II (50%) degrees of activity prevailed; II (50%) radiological stage; I (44.4%) and II (44.4%) degrees of joint functional insufficiency. As basic therapy, group I patients received methotrexate (10-15 mg/week), the "gold" standard of basic RA therapy aimed at slowing the progression of the disease. Group II included 14 women and 4 men (average age – 47.6±13.1 and 55.7±10.7 years, respectively). The duration of RA disease varied from 1 to 21 years (average duration 3.8 years). Seropositivity was detected in all patients. Patients with I (33.3%) and II (55.5%) degrees of activity prevailed; II (44.4%) and III (38.8%) radiological stages; II (77.8%) degree of functional insufficiency joints. As basic therapy, group II patients took methotrexate (7.5–10 mg /week) and infliximab infusions (300 mg intravenously, first administration). Infliximab (a drug of genetically engineered biological therapy, TNF-alpha inhibitor) reduces the expression of factors that support the activity of the disease, which results in a rapidly developing positive clinical and laboratory effect in the treatment of RA. The combination of methotrexate with infliximab is recognized as the most effective. All patients underwent general clinical (collection of complaints, anamnesis, objective examination) and laboratory tests, radiography of joints. The psychoemotional status was studied using the SF-36 quality of life assessment questionnaire, the Tsung scale for determining the level of anxiety and depression, the MINI-MULT questionnaire and DPTAD (determining the prevailing type of attitude to the disease). In statistical data processing, the average group values, variance, and standard deviation were used. The nonparametric Mann-Whitney U–test was used for the distribution of a

feature that differs from the normal one. For final conclusions, the results were considered at the confidence level ($p< 0.05$).

RESULTS

It is established that QL (mental health) of patients of groups I and II, judging by the scales of the SF-36 questionnaire, corresponds to the average level. It was revealed that the PF scale indicators do not exceed 52.5%, which indicates a significant restriction of physical activity of patients with RA health status (walking, climbing stairs, carrying weights and so on). At the same time, there was a marked decrease in the indicator of the RP scale. In all the examined patients, this indicator is no more than 21%, which indicates a significant limitation of daily activities by the physical condition of patients with RA.

Table 1 Differences in indicators of MINI-MULT questionnaire scales in groups according to the nonparametric Mann–Whitney U–test

Group	L	F	K	Sd	Hy	Pd	Pa	Pt	Se	Ma	I
I	50±3,1	45±2,7	55±1,9	63±3,1	55±3,3	51±3,3	40±1,6	40±1,6	59±2,1	54±1,5	54±1,5
II	50±3,5	44±2,6	52±2,3	67±2,3	61±3,5	57±3,1	37±2,7	37±3,7	61±2,1*	53±2,5	41±2,1

Result it is consistent with the characteristics of the groups according to the parameters of the degree of activity and the radiological stage of the disease, the degree of functional insufficiency of the joints. Social functioning does not exceed 43%, which indicates a significant restriction of social contacts of patients, a decreas in the level of communication due to deterioration of physical and emotional state. All this is explained by the fact that physical activity (daily activity), as well as low the level of communication of patients with RA is significantly limited by the state of health due to the chronic, steadily progressing course of the disease. The low assessment of QOL given by patients is probably also associated with characterological characteristics (over-conscientiousness, obligatoriness, a tendency to suppress aggressive and hostile impulses, a strong need for self-sacrifice, super-moral behavior). Comparative analysis of averaged profiles. It was revealed that in both groups, almost all indicators of the MINI-MULT questionnaire scales are within normal values (40-70 points), while there is a tendency to increase indicators on the Hs, D, Hy scales. Table 1 shows the differences of the studied indicators in the groups according to the Mann-Whitney U–criterion. The highest value of hypochondria was observed in group II (67±2.3), taking methotrexate + infliximab, slightly lower in group I – (63±3.1), taking methotrexate. This indicates the "proximity" of the subjects to the astheno-neurotic the type that is characterized by despondency, melancholy, melancholy. In addition, group II was dominated by patients who had indications for biological therapy – the steady progression of the disease, the persistence of activity and the ineffectiveness of standard therapy, which in itself could not but be reflected in the change in psychoemotional status.

Table 2 The level of depression in groups I and II of RA patients, depending on the seropositivity for rheumatoid factor (RF), the presence and absence of systemic manifestations, score (% of patients)

Indicator	Group	
	1	2
Seropositivity	48 (77,8)	43 (100)
Seronegativity	46 (22,2)	–
Presence of systemic manifestations	46 (72,2)	42 (66,6)
Absence of systemic manifestations	49 (27,8)	44 (44,4)

Table 3 The level of depression in groups I and II of RA patients, depending on the X-ray stage, score (% of patients)

Group	X-ray stage			
	I	II	III	IV
1	48 (16,7)	48 (50)	46 (16,7)	46 (16,7)
2	-	42,5(44,4)	45(38,8)	40(16,8)

Higher values of indicators of depression scales (61±3.5), hysteria (57±3.1), psychasthenia (61±2.1) indicate sensitivity, sensitivity of patients, a tendency to anxiety, the cause of which there may be situations related to the disease when the normal course of life is disrupted, and long-term plans are uncertain. Such patients are characterized by instability, lability of emotions, instability of self-esteem and mood. They are dominated by a passive passive attitude, self-doubt and stability of the situation, high sensitivity and subjection to environmental influences, increased sensitivity to danger. There is uncertainty in the expectation of positive changes on the background of treatment, their duration, the possibility of continuing this therapy, development of events in the absence of the expected effect or interruption of effective treatment: anxiety of a long-term ill person for your future.

In the psychoemotional status of patients of groups I and II with RA, which did not depend on the duration, stage of the disease and age of patients undergoing therapy, certain features can be distinguished: despondency, melancholy, melancholy. In addition, the psychoemotional characteristics of patients with RA are due to the chronic progressive nature of the disease, in some cases with the persistence of inflammatory activity, deterioration of health and functional capabilities, anxiety in connection with the prospects for the development of the disease, despite the ongoing drug therapy.

Table 4 The level of depression in groups I and II of RA patients, depending on the degree of activity and on the FIJ, score (% of patients)

Group	Degree of activity		
	I	II	III
1	49 (33,3)	47 (50)	43 (16,7)
2	46 (33,3)	43 (55,5)	43 (12,2)
Group	functional insufficiency of joints		
	I	II	III
1	48 (33,3)	48 (50)	42 (16,7)
2	42 (33,3)	44 (55,5)	35 (12,2)

In 2/3 of group I patients, a harmonious type of attitude to the disease was revealed, in 1/3 – an anxious type. The latter was characterized by continuous anxiety and suspiciousness about the unfavorable course of the disease, possible complications, ineffectiveness and even danger of treatment, the search for new ways, thirst for additional information about the disease, expressed interest in objective information about the disease: the mood is anxious. In group II, a harmonious type of attitude to the disease prevailed. He was characterized by a sober assessment

Table 5 The level of anxiety in groups I and II of RA patients, depending on the seropositivity for rheumatoid factor (RF), the presence and absence of systemic manifestations, score (% of patients)

Indicator	Group	
	1	2
Seropositivity	0,52 (77,8)*	0,52 (100)*
Seronegativity	0,54 (22,2)*	-
Presence of systemic manifestations	0,53 (72,2)*	0,54 (66,6)*
Absence of systemic manifestations	0,52 (27,8)*	0,49(44,4)

of the state of health, without a tendency to exaggerate its severity and without reason to see everything in a gloomy light, but also without underestimating the severity of the disease; the desire to actively contribute to the success of treatment in everything; unwillingness to burden others with the burdens of self-care. Thus, patients receiving methotrexate + infliximab (group II) have a better assessment of their condition than patients receiving methotrexate monotherapy

(group I). This is explained by the fast and the powerful positive effect of the received drug (methotrexate + infliximab) therapy, which gives group II patients hope for the future. The values of the severity of depression on the Tsung scale, depending on the seropositivity of the rheumatoid factor (RF), the presence or absence of systemic manifestations, are presented in Table 2, depending on the X–ray stage – in table 3, the degree of activity and functional insufficiency of the joints (FIJ) - in table 4. It was found that the level of depression of patients

with RA did not depend on the medication received therapy, the presence or absence of systemic manifestations, seropositivity or seronegativity, activity, stage, degree of FIJ. This probably confirms the judgment that RA as a chronic progressive autoimmune systemic rheumatic disease

Table 6 Anxiety level in groups I and II of RA patients depending on the X-ray stage, score (% of patients)

Group	X-ray stage			
	I	II	III	IV
1	0,5 (16,7)	0,51 (50)*	0,55 (16,7)*	0,59 (16,7)*
2	-	0,47 (44,4)	0,53 (38,8)*	0,6 (16,8)*

is a classic variant of psychosomatic disease. The magnitude of the severity of anxiety on the scale Tsung, depending on seropositivity, the presence or absence of systemic manifestations are presented in Table 5, depending on the radiological stage – in Table 6, on the degree of activity

and the Federal Tax Service – in Table 7.It was revealed that patients of groups I and II are prone to anxiety. However, in group II patients, anxiety is less pronounced according to the criteria of the FIJ and the X-ray stage. Perhaps this suggests that patients of this group taking basic therapy – methotrexate + infliximab, adequately respond to the therapy, achieve the desired results faster, thereby reducing the level of anxiety. In general, the level of anxiety did not depend on the activity, stage, degree of functional insufficiency of joints, gender and age of patients in the study groups.

Table 7 The level of alarms in groups I and II of RA patients, depending on the degree of activity and on the FIJ, score (% of patients)

Group	Degree of activity		
	I	II	III
1	0,52 (33,3)*	0,52 (50)*	0,55 (16,7)*
2	0,51 (33,3)*	0,5 (55,5)	0,57 (12,2)*
Group	functional insufficiency of joints		
	I	II	III
1	0,52 (33,3)*	0,52 (50)*	0,55 (16,7)*
2	0,51 (33,3)*	0,5 (55,5)	0,57 (12,2)*

DISCUSSION and CONCLUSION

It has been shown that in patients with RA, the level of QL is significantly reduced, regardless of the ongoing drug therapy. So, their daily activities are limited, the level of communication is reduced due to the deterioration of their physical and emotional state. The psychoemotional status is dominated by: melancholy, sensitivity, increased anxiety, mood instability and emotional lability, instability of self-esteem, a tendency to take a passive passive position, self-doubt and stability of the situation, high sensitivity and subjection to environmental influences, increased sensitivity to danger. Patients with

RA who receive therapy with monoclonal antibodies to TNF-alpha (infliximab) along with methotrexate assess their condition as more prosperous. The levels of depression and anxiety also did not depend on the duration, activity, stage of RA, the degree of functional insufficiency of the joints. Consequently, in patients with RA, with a significant decrease in the level of QL, the features of the psycho-emotional status requiring correction were revealed with the help of psychotherapy and pharmacotherapy. The use of infliximab in the treatment of RA is accompanied by an improvement in the assessment of the condition of patients as a whole. In order to determine the optimal schemes for correcting the identified disorders, improving the effectiveness of complex therapeutic measures, it is necessary to further study the psychoemotional status of patients with RA.

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