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Original Research Paper

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LEVEL OF DEPRESSION IN RHEUMATOİD ARTHRITIS AND LIFE QUALITY

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ABSTRACT

Rheumatoid arthritis is a chronic illness showing quite variations in terms of its progress and prognosis. Therefore» it is critical to evaluate patient's functional and sociopsychological losses due to rheumatoid arthritis in assessing the severity of the illness. Two patients with the same clinic would view quality of life differently. The purpose of this study is to investigate the relationship of clinical parameters and depression levei associated with rheumatoid arthritis to quality of life.

The study included 50 patients with rheumatoid arthritis and 50 healthy person as control group. A Standard form was used to gather patients data. Data were collected from patients about illness duration, the way it started, the first involved joint, systemic and laboratory findings, duration of moming stififhess, pain, Ritchie disjoint index, Lee functional index, fimctional capacity, exiting deformations, factors stimulating the illness and quality of life. The pain was measured by visual analog scale (VAS) and depression level was measured by Beck depression scale, Health Assessment Questionnaire (HAQ), Nottingham Health Profile (NHP) and Arthritis Impact Measurement Scales were used to measure quality of life. First, the patient and control group were compared to see if there is significant difference between the two in ternıs of these measures. Then, the patient data were used to examine the correlation of clinical parameters and depression level associated with rheumatoid arthritis to quality of life scores.

The average age was 50.04 ± 11.14 (25-73) for patient group and 48.40 ± 19.67 (22-76) for control group. Both patient group and control group included 38 females and 12 males. There was no significant difference between two groups in terms of age and gender (p>0.05). The scores of Beck depression scale, HAQ, NHP for patient group were 21.06±7.8,1,38±0.6 and 63.42±17.0, respectively while these scores in the same order were 14.32±6.3, 0.46.0.5 and 37.58 ± 21.3. These there scores were significantly different between two groups (p=0,020, p=0.001. and p=0.00019, respectively). In patient group the depression level was significantly correlated with VAS (r=0.35, p<0.05), Lee fimctional index (r=0.32, p<0.05) and NHP score (r=0.63, p<0.001).

In conclusion, the study found significant differences between the patient and control groups in terms of depression level and NHP and HAQ scores used to measure quality of life, which indicated that the quality of life of the patients with rheumatoid arthritis was negatively influenced. In addition, the study found that depression level was positively correlated with pain, functional index and NHP. These findings suggested that the patients with rheumatoid arthritis should be examined in terms of depression and quality of life.

KEYWORDS : Rheumatoid arthritis, Life quality,Depression

INTRODUCTİON

Rheumatoid arthritis is one of the major diseases that cause loss of function among the musculoskeletal system disease.Joint damage, deformity and complications are inevitable in patients who are not treated adequately during the disease process.Rheumatoid arthritis (RA) is a chronic, progressive, inflammatory disease that causes diatrodial joints, remission and exacerbations and causes deformities(1). It causes functional disability by leading to deformities in the interim periods and this hinders the daily activities of the patient.

Factors considered to play a role in the etiology of rheumatoid arthritis include infections, genetics, immune system disorders, trauma, stress, gender, endocrine factors and the environment (2). However, it is certain that immunological factors play a role in the etiology. (3). RA is defined as the main synovium disease because it affects synovial joints and synovial tendon sheaths (4).

Rheumatic diseases can lead to very severe deformities, which may make the patient dependent on the bed, and the patient may become a person with physical and economic freedom and social and psychological problems (5).In RA, joint damage occurs due to synovitis. Two cartilage destruction, such as cartilage destruction and joint destruction, depend on metalloproteinases produced by synovial fibroblasts and macrophages or activated chondrocytes. Bone destruction occurs either by synovial osteoclasts or by direct invasion of the pannus to the adjacent bone (3)

The aim of our study was to investigate the relationship between depression levels, clinical parameters and quality of life in patients with active rheumatoid arthritis.

MATERİAL and METHOD

The study group consisted of 50 patients diagnosed as RA according to the 1987 ARA criteria and hospitalized in Dicle University Medical Faculty Physical Medicine and Rehabilitation Clinic between 2002-2002.

Fifty healthy subjects were included in the study. All patients were selected from the patients with polyarticular and symmetric involvement.

Non-working criteria

1- Those with systemic disease
2- Those with a secondary rheumatic disease
3- Working principle of any psychiatric disease:

A standard form was used to evaluate the patient data.
All patients were evaluated in terms of disease duration, disease onset, first joint, systemic findings and morning seizure time, VAS, Ritchie joint index, Lee functional index, Larsen radiological score, functional capacity, current deficits, disease triggering factors and depression scale.

The duration of the morning arrest was recorded in minutes.
ESR (Erythrocyte sedimentation rate) was measured as mm / h by Westergren method.

RF was determined qualitatively by latex agglutination method.
Routine and biochemical investigations of the patient and control groups (CUR, urea, creatinine, AST, ALT, total bilirubin, total protein, albumin, globulin, serum Fe, serum iron binding capacity), hematologic (hemoglobin, hematocrit, locos, platelets, sedimentation) and serological (CRP, latex agglutination test).

Functional capacity assessment; If the patient fulfills all of his activities, he is classified as 2nd degree if he fulfills his daily activities despite minimal restriction, 3rd degree if he cannot perform his / her daily care and himself as 4th degree if all activities are limited.

Ritche joint index was used to evaluate painful and swollen joints. If

the joint is not sensitive, it is 0, if it is sensitive, it is sensitive and if it is touching 2, it is complained of sensitive touching and 3 points are given. At the same time, the number of swollen joints was also determined.In the radiological score of Larsen 0: Normal (no RA finding) 1: Mild abnormalities (periarticular tissue swelling, periarticular osteoporosis and mild joint gap stenosis) 2: Definitive abnormality.Presence of minor erosion 3: Significant abnormality (erosion and joint stenosis) 4: Severe abnormality (partial presence of the original articular surfaces) Pain assessment of the patients was performed by Vissivary Scale Scale (VAS). She was asked to show the patient the current pain at scale ranging from 0 to 10 in increasing intensity.The daily living activities were evaluated with Lee's functional index. 0 if GYA can do it easily; 1, if not, 2 points were given. The general health status and quality of life of the patients were determined according to HAQ, NHP, AIMS scales and depression level.

Statistical Analysis:

The results were evaluated by SPSS program on computer. Independent student t test to compare the means of the patient and control groups; X2 test was used to compare categorical variables and Fisher's exact test was used in cases with few cases.Pearson correlation test was used to determine the correlations between the parameters in the patient group. P <0.05 was considered significant.

RESULT

The age of 50 patients with RA was 25-73 years, and the mean age was 50.04 ± 11.14 years. The age of the control group was between 22-76 and the mean age was 48.40 ± 19.67. There was no statistically significant difference between the age of the patient and the control group (P> 0.05).

Demographic characteristics of the patient and control groups are shown in Table 1. There were no significant faults in demographic characteristics (P> 0.05).

Table 1: Demographic characteristics of RA and patient with mechanical low back pain

		Group 1	Group 2
Gender	Female	38	38
	Male	12	12
Education Status	Not readable	15	12
	You can read and write	19	19
	secondary education	6	12
	Collage	8	5
	High school	2	2
Smoke	No smoke	33	34
	Smoke	17	16
Stress	Yes	45	29
	No	5	21

Table-2: Laboratory of the patient and control group with RA

Only four of the 50 patients had a profession and two of them were high school graduates.

Forty patients with RA were active (80%) according to remission criteria.

30 patients (60%). NSAIDs were using steroids, TEI group drugs.

None of the patients had accompanying systemic disease.

41 of the patients had trauma (birth, operation, stress, accident, seasonal change, etc.) that triggered the disease. 28 of 50 patients had polyarticular, 12 had oligoarticular and 10 had monoarticular involvement.The most commonly involved joints were wrist (4), PDF (6), knee (7), respectively; The least involved joints were the shoulder (2) and the ankle (3). 30 patients had symmetrical joint involvement. Only ahi patient had no symptoms such as fatigue, fever, fatigue. There was morning stiffness in 37 patients lasting more than 1 hour. 35 patients had deformity; The most common deformity was flexion deformity and was present in 20 patients. Other deformities, respectively; ulnar deviation (4), button marrow deformity (8), swan neck deformity (9), hallux valgus (10). In addition, 5 patients had rheumatoid nodules.

Table-2: Laboratory findings of RA patients and controls

	Group 1	Group 2	
	Mean±SD	Mean±SD	P value
Hgb	12,82 ±1,7	14,00 ±1,4	0,0001
Hct	36,82 ±4,5	38,84 ±2,9	0,01
Trombocyte	346,96 ±139,7	300,04 ±116,4	0,071
Sedimentation	47,72 ±26,6	27,02 ±16,1	0,000
CRP	27,50 ±41,6	8,24 ±5,6	0,002
RF	136,08 ±166,3	23,20 ±51,8	0,000
Fe	67,00 ±27,6	77,48 ±24,2	0,047
SfeBK	292,30 ±95,5	241,38 ±105,3	0,013

All laboratory findings except the platelet count were significantly higher in the patient group

Table 3: Comparison of functional indexes of RA patient and control group

	Group 1	Group 2	
	Mean±SD	Mean±SD	P
Lee	14,22 ±7,1	5,46 ±4,7	0,000
Larsen	42,40 ±22,3	17,52 ±14,9	0,000
Ritchie	12,46 ±9,3	1,56 ±5,6	0,000

The Lee, Larsen and Ritchie indices of RA patients and control groups are shown in Table 2.

Lee, Larsen and Ritchie were found to be statistically significant (P = 0.000) between the two groups.

Table 4: Comparison of RA and patient with healthy control group in terms of quality of life and depression

	Group 1	Group 2	
	Mean±SD	Mean±SD	P
HAQ	1,38 ±0,6	0,46 ±0,5	0,000
BECK	21,06 ±7,8	14,32 ±6,3	0,000
AIMS	4,1 ±0,5	3,64 ±0,5	0,000
NHP	63,42 ±17,0	37,58 ±21,3	0,000
VAS pain score	7,08±1,72	5±2,44	0,000

The scores of VAS, HAQ, Beck and NHP scales of patients with RA and healthy control group are shown in Table 4.

The difference between VAS, Beck, AIMS, HAQ and NHP scales was statistically significant (P <0.005).

Table 5: Correlation table showing the relationship between variables in RA patients

Parameters	AİMS	HAQ	NHP	Beck	Lee	Larsen	Ritchie
Morning stiffness	-0,004	0,161	0,152	0,032	0,262	0,324*	0,183
VAS pain score	0,209	0,343*	0,315*	0,351*	0,447***	0,390**	0,386**
Lee'nin fonksiyonel indeksi	0,031	0,550***	0,524***	0,322*	1,000	0,574***	0,339
Larsen'in Rad.class	0,029	0,439	0,318	0,161	0,574***	1,000	0,284*
Ritchie joint index	0,031	0,222	0,191	0,244	0,339*	0,284*	1,000
Sedimentation	0,165	0,414**	0,209	0,048	0,331*	0,294*	0,417*
CRP	-0,013	0,235	0,129	0,039	0,075	0,018	0,149
RF	-0,215	0,048	-0,005	-0,085	0,045	0,048	0,049

Serum Fe	0,270	-0,044	0,009	0,095	0,062	0,038	0,168
Serum Fe BK	-0,221	0,071	-0,172	-0,014	0,182	0,177	-0,043
NSP	0,152	0,500***	1,000	0,632***	0,524***	0,318*	0,191
HAQ	0,069	1,000	0,500***	0,255	0,550***	0,439***	0,222
Beck	0,109	0,255	0,632***	1,000	0,322*	0,161	0,244
AİMS	1,000	0,069	0,152	0,109	0,031	0,029	0,031
Disease duration	0,115	0,169	0,089	-0,020	0,119	0,355*	-0,003

Table 5 shows the correlation matrix table showing the relationship between the variables in the RAI patient group.

VAS pain score with HAQ scale (r = 0.343 p <0.05), Lee's functional index (r = 0.550 p <0.001), sedim (r = 0.414 p <0.01) and NHP (r = 0.500 p < There was a positive correlation between 0.0QI.

There was a positive correlation between NHP and VAS pain score (r = 0.315 p <0.05), Lee's functional index (r = 0.524 p <0.001) and Beck scale (r = 0.632 p <0.001).

VAS pain score (r = 0,351 p <0,05) with Beck scale, Lee's functional index (r = 0,322 p <0,05)

positive correlation was present.

VAS pain score with Lee's functional index (r = 0.447 p <0.001), Larsen's radiological score ((= 0.574 p <0.001) Ritchie joint index (r = 0.333 p <0.05) and sediment (r = 0.33) There was a positive correlation between p <0.05.

Larsen's radiological score and morning stiffness (r = 0,324, p <0,05), Ritchie joint index (r = 0,284 p <0,05), sedim (r = 0,294 p <0,05), NSP (r = There was a positive correlation between disease duration (r = 0,355 p <0,05), VAS pain score (r = 0,39 p <0,01), HAQ (r = 0,439 p <0,001). .

DISCUSSİON

Rheumatoid arthritis leads to deformities in later periods and causes functional impairment, which affects the daily life activities of the patient. In this disease, which is characterized by remission and exacerbation, pain is an important problem. These problems are further increased when there is systemic involvement in patients with RA.

Considering all this, it is inevitable that one's mental state will be affected.

In some studies, it has been reported that mental disorder is related to the etiology of the disease and in some cases it is related to the activation of the disease.

According to the results of the measurement in England and the Netherlands, it was seen that the quality of life scores in patients with RA who showed significant activation were more affected than patients with moderate and moderate activation (11). Cetin A et al(12), lower back pain and quality of life of patients after microdiscectomy were examined.VAS scores showed a gradual decrease in postoperative severity.Lumbar pain is the main reason for applying to the emergency department.

AIMS's anxiety and depression scale makes a global assessment of the patient's psychological state.It is not a complete overbearing scale. HAQ is a scale that can be used easily by clinicians. In their study, Spiegel et al. Found a correlation between the tests that measured the functional capacity of the patient and the tests that showed mental health.However, they could not determine which was superior to the other (13).

Guillemen et al. Reported that the severity of physical loss in RA patients with a disease duration of less than five years, with the number of sediments and painful joints; found that they have been associated with radiological damage and extra articular findings in patients with a disease duration of five years (14).In our study, a significant relationship was found between the duration of disease and Larsen's radiological score.RA is a chronic disease with symmetrical inflammatory synovitis in the joints. Synovial inflammation causes cartilage damage and bone erosions.Both anatomic joint damage and functional disorders are the long-term results of RA (15).

A significant relationship was found between the disease score, disease severity, sediment values, and functional disability in the 100 disease studies of Alanoğlu et al. (L 43). In our study, there was a significant relationship between pain and functional capacity. Although most researchers found a significant relationship between these two parameters, they emphasized the fact that the questions in pain, anxiety, and depression scales were subjective and could be perceived differently by the patient and clinician (16,17).

It is a fact that pain, which is one of the most important activation parameters, is effective in the psychological life of the patient and contributes to the formation of psychiatric disorders. Havvley and Wolf »In the study series of 400 RA patients, they found a relationship between pain and mental variables (IQ7). In their group, they found a high correlation between pain and anxiety and depression (18). In our study, there was a significant correlation between pain and depression.

Finally, in a large group of 238 patients, Smetstad et al. Found a high positive correlation between both the measured pain and the perception of pain in patients with anxiety and depression(19).

Radiological erosions are an indication of the damage caused by RA in bone and cartilage.

However, the proliferative synovitis seen in RA changes the structural properties of the tendons by infiltrating them. Thus, even functional rupture of tendons may even lead to rupture (20). Although radiographs have significant erosions and loss of joint space, joint function may not be impaired as long as tendon functions are preserved.In addition, the incidence of entrapment neuropathies in RA patients also increases. Some functional disorders may occur due to the resulting trap neuropathies (21)

Abdel-Nasser et al., Who found that the depressive findings were more intense in patients with RA compared with cases with osteoarthritis, were a series of 100 cases (22). In a study of 23 patients Mr. and his friends, age, disease duration, morning stiffness, HAQ, grip strength, sedimentation rate, CRP and leukocyte were not correlated with mental variables (23).

However, between the scores of joint swelling and Hamilton depression and anxiety scale; between the scores of joint sensitivity scores and state anxiety scores; There was a significant relationship between VAS and Hamilton anxiety and state anxiety scale scores. As a result of this study, it was concluded that patients with RA had no significant impairment in terms of depression and trait anxiety; however, it was concluded that patients' immediate anxiety, joint sensitivity, swelling and subjective perception of pain were mutually influenced.

Therefore, it is stated that keeping physical parameters as well as psychological parameters in the follow-up of patients may affect the success of the treatment positively.

In our study, VAS pain score between HAQ, NSP, Beck scale; A

significant relationship was found between sediment and HAQ scale.There are few studies comparing the sensitivity of health status measurements to change.In a study by Fitzpatrick et al., It was reported that there was no clear tendency that disease-specific interrogations were more sensitive to change than more general inquiries (24).In a study by Krol et al., It was found that patients with recently diagnosed RA had a reduction in their activities, a decrease in physical condition and social functions (25).

Bendtsen et al in his study; It has been reported that RA affects the most physical life, followed by psychological and social life.The relationship between physical and psychosocial dysfunction is important here (26).Bekkelund et al. Suggested that increased psychosocial disorders in women with RA could be explained mainly by the feeling of inadequacy (27).

In a study conducted by Bouchet et al., RAQ, NHP and General Health Questionnaire were applied to patients with RA. They noted that significant changes in quality of life in patients with clinically significant changes after a one-year follow-up could only be demonstrated by HAQ.Among these 3 questions, HAQ should be preferred; They stated that HAQ could be supported by a general questioning that investigated the quality of life in more sections (28).In a study by Fitspatrick et al(24)., 73 patients with RA were evaluated with NHP, AIDS and a series of clinical measurements. NHP's scales related to energy, pain, mobility and emotional state; clinical evaluations were significantly correlated with other measures such as Beck depression questionnaire and AIMS geçş equivalent scale, indicating the validity of NHP for RA

Şahin et al, NHP, AIDS, HAQ such as inquires; rheumatologic measurements (ESR, articular index and hand tightening power) showed similar compliance levels.General inquiries were found to be less sensitive to changes over time when compared to inquiries specifically developed for RA; In conclusion, it was concluded that general inquiries could be used to compare changes in health status in RA patients (29). In our study, we found that quality of life and health status were significantly affected in RA patients compared to the control group.In a study, it was reported that radiologically detected erosions in RA patients were not an indicator of functional status. Therefore, it was reported that the functional status of patients in RA who were not limited to radiological evaluations in planning and follow-up should be followed regularly (30).

Functional impairment in RA affects the emotional state, social life and quality of life of the person (31).The improvement in functional parameters also affects the compliance and satisfaction of the patients (32).Increased disease activity, joint pain, swelling, tenderness, deformities; disorders can lead to physical disability by preventing the patient from performing life, mobility and self-care activities independently.

As a result, the person may not be able to continue his / her work, may not be able to fulfill his / her role in the family, social activities may be restricted, the patient may be socially, professionally and economically disabled and the quality of life is negatively affected(33,34,35)**.**Physical and psychological sequelae of rheumatoid arthritis do not only affect quality of life.It also causes a decrease in the expected life span (36).

CONCLUSİON

In our study, it was determined that there was a significant difference between the patients with rheumatoid arthritis and the control group with quality of life scores such as NHP and HAQ in terms of depression levels and the quality of life of patients with rheumatoid arthritis was adversely affected.

In addition, our study indicates that there is a positive correlation between depression level and pain, functional index and NHP, and RA patients should be evaluated in terms of depression and quality of life.

With the discovery of new drugs, the progression of the disease can be stopped and the quality of life of the patients can be increased in more and more patients. Calcium and vitamin D rich foods can be prevented against osteoporosis.

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