Original Article

Evaluation of Quality of Life and Functional Status in Elderly Patients with Rheumatoid Arthritis

Yaşlı Romatoid Artritli Hastalarda Yaşam Kalitesi ve Fonksiyonel Durumun Değerlendirilmesi

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ABSTRACT

Objective: This study was conducted to evaluate quality of life, functional status and pain in elderly patients with rheumatoid arthritis (RA).

Methods: The sample of this study consisted of 229 outpatients followed up in the rheumatology department of a hospital with a diagnosis of RA and those over 65 years old who were treated in the internal medicine clinic of the same hospital. Research data were collected using a Personal Introduction Form, the Disease Activity score 28 (DAS-28), the Numerical Pain Assessment Scale, the Health Assessment Questionnaire (HAQ) and the SF-36 Quality of Life scale.

Results: The physical conditions of the non-RA elderly individuals were statistically worse compared to those with RA (p=0.01). There was a significant negative correlation between patient age and visual analog score, physical function, physical role limitations, emotional role limitations and social functionality subscale scores, and a significant positive correlation between age and HAQ scores (p<0.05).

Conclusion: In the study, elderly patients with RA had fewer physical limitations in daily activities and their severity of pain was not different than that of adult patients with RA. The physical and social functionality of the elderly who had received treatment due to a chronic disease other than RA had lower physical and social functionality, but their quality of life was better.

Keywords: Elderly patients, functional status, quality of life, rheumatoid arthritis

ÖZ

Amaç: Bu çalışma, yaşlı romatoid artritli (RA) hastalarda yaşam kalitesi, fonksiyonel durum ve ağrıyı değerlendirmek amacıyla yapıldı.

Yöntemler: Araştırmanın örneklemini bir hastanenin romatoloji polikliniğinde RA tanısı iletakip edilen 229 hasta ile aynı hastanenin dahiliye kliniğinde tedavi gören 65 yaş üstü hastalar oluşturdu. Araştırma verileri Kişisel Tanıtım Formu, Hastalık Aktivite Puanı 28 (DAS-28), Sayısal Ağrı Değerlendirme Ölçeği, Sağlık Değerlendirme Anketi (HAQ) ve SF-36 Yaşam Kalitesi Ölçeği kullanılarak toplanmıştır.

Bulgular: RA tanısı olmayan yaşlı bireylerin fiziksel durumları RA tanısı olanlara göre istatistiksel olarak daha kötüydü (p=0,01). Hasta yaşı ile görsel analog skoru, fiziksel fonksiyon, fiziksel rol kısıtlılıkları, emosyonel rol kısıtlılıkları ve sosyal işlevsellik alt ölçek puanları arasında negatif; yaş ile HAQ puanları arasında pozitif yönde anlamlı korelasyon saptandı (p<0,05).

Sonuç: Çalışmada yaşlı RA'lı hastaların günlük aktivitelerinde daha az fiziksel kısıtlamaları olduğu ve ağrı şiddetlerinin erişkin RA'lı hastalardan farklı olmadığı görüldü. RA dışında kronik bir hastalık nedeniyle tedavi gören yaşlıların fiziksel ve sosyal işlevselliklerinin daha düşük, yaşam kalitelerinin ise daha iyi olduğu görüldü.

Anahtar Sözcükler: Yaşlı hasta, fonksiyonel durum, yaşam kalitesi, romatoid artrit

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Introduction

Rheumatoid arthritis (RA) is a frequently seen systemic autoimmune disease of the musculoskeletal system, primarily affecting the synovial joint leading to progressive disability (1). The disease is mostly seen between the ages of 20-50, and occasionally in older people (2). Approximately 30% of RA cases occur in old age and that rate is increasing every day worldwide (3). The elderly RA population consists of both individuals who develop RA at an advanced age and patients diagnosed as having RA early in life (4). The occurrence of the disease at age 60 and above is defined as late-onset or elderly-onset RA (5). Old age related physiological changes and RA that occurs in advanced ages cause a decrease in functional capacity (6). In studies, patients with late-onset RA were reported to have more prominent and acute symptoms and higher disease activity than patients with early-onset RA (7,8). Some studies, on the other hand, have reported that the response to anti tumor necrosis factor-alpha (TNF- α) drugs used in the treatment of RA varies according to age groups, and that the response is better in young people (9). Though, the reason for this difference between age groups in terms of disease activity cannot be fully explained.

Chronic inflammation and pain often lead to a decrease in physical activity and functional disabilities in patients with RA (10) and a significant reduction in the quality of life (11,12). Low quality of life is associated with high disease activity and functional disability (13,14). Since functional disability is associated with disease activity and radiographic joint damage, functionality is frequently used as an outcome to evaluate the effect of RA over time (15). In a study conducted with an Asian population, it was found that patients with late-onset RA had a worse functional status due to comorbidities than patients with early-onset RA. On the other hand, despite their poor physical functionality, patients with late-onset RA were reported to cope better emotionally and mentally than patients with early-onset RA (16). In another study comparing disease activity and the quality of life of patients with RA both under and over 60, it was determined that the physical health and physical functions of elderly patients with RA were worse and that their quality of life was more negatively affected (17).

Individuals have difficulty in fulfilling their daily activities due to physical dependence and functional regression with old age. With aging, the quality of life deteriorates due to disease-related complications, comorbidities, social or economic problems, and changes in daily life activities (18,19). In another study examining the relationship between age and quality of life in individuals with RA, it was reported that elderly patients with RA, similar to the general population, had lower quality of life scale scores in terms of physical activity than younger patients with RA (20). Health professionals should be aware of disease-related inflammatory changes and old age-related physiological changes while ensuring the follow-up and care of elderly patients with RA. In this study, the functionality and quality of life of elderly patients with RA was evaluated by comparing with younger patients with RA and elderly non-RA individuals.

Methods

Study Design

This descriptive study aims to evaluate quality of life, functional status and pain in elderly patients with RA.

Research Place

Research was carried out at the rheumatology outpatient clinic and internal diseases clinic of university hospital after obtaining permission from the ethics committee and the institution.

Sample

The sample of the study consisted of patients who were over 18, treated and monitored due to a diagnosis of RA in the outpatient and internal clinic of the rheumatology department, and patients aged 65 being treated in the internal diseases clinic of university hospital. All included were literate and agreed to participate in the study (Figure 1).

According to an age classification of the World Health Organization (www.healthindicators.org), RA patients between 18-65 formed the adult group, patients over 65 constituted the elderly group and individuals over 65 who had been treated for any other health issue in the internal medicine clinic formed the non-RA elderly group. A power analysis was used to determine the size of the research sample. In calculating the sample, the results of the study conducted by Koçyigit et al. (21) were used as reference and the size of the sample was determined as 225 units, 75 units in each group, with a power of 80%, type I error of 5% and medium effect size (ES =0.3). The study was completed with a total of 229 patients (21).

Exclusion criteria of the research

- Patients with a variable level of consciousness (changes in consciousness such as confusion, stupor, dementia),

- Patients with a known psychiatric disorder,

- Patients with severe hearing or visual impairment,

- Patients who did not agree to participate in the study were not included.

Data collection method and data collection tools

In the study, patients who met the inclusion criteria were informed by a researcher and written consent was obtained. A Personal Introduction Form developed by researchers according to available literature, the Disease Activity Score 28 (DAS-28), the Numerical Pain Assessment Scale, the Health Assessment Questionnaire (HAQ) and the Short Form of Survey-36 (SF-36) Quality of Life Scale were implemented to patients using via face-to-face interview.

Personal introduction form: this form was developed by researchers according to the literature (22,23) and consisted of 18 questions on socio-demographic characteristics, disease and treatment.

Figure 1. Subjects' recruitment flow diagram
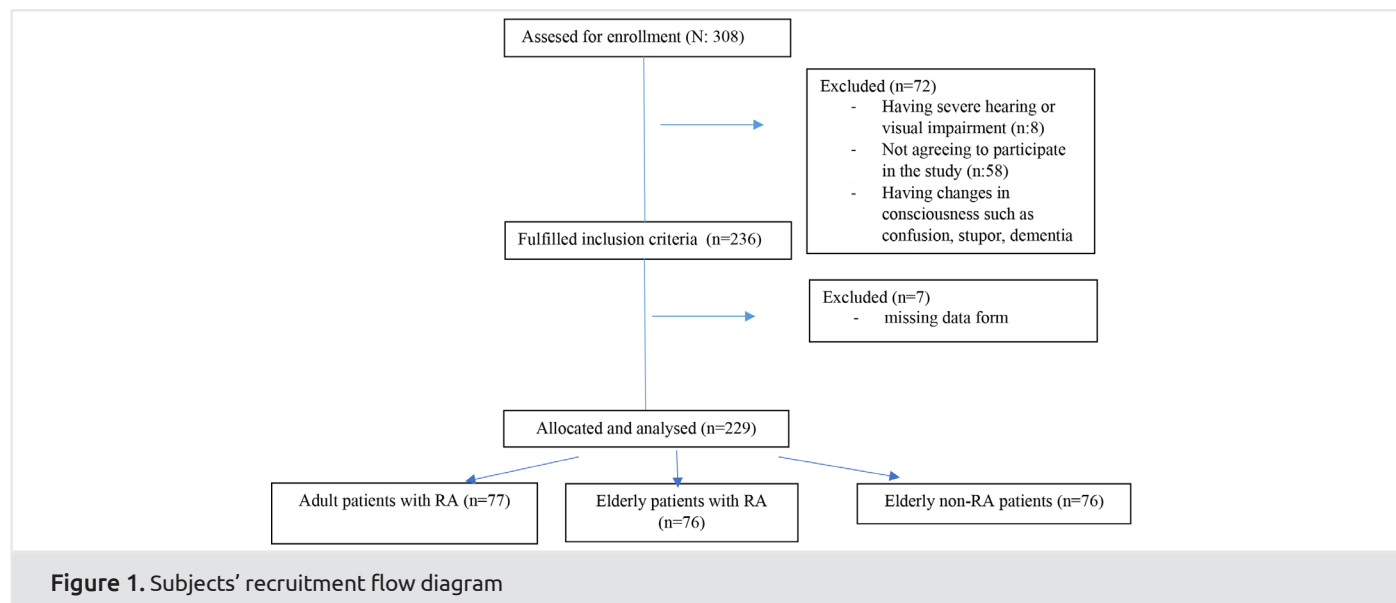
Disease activity score 28 (DAS-28): This is a score routinely used during RA exams to evaluate disease activity in which 28 joints are assessed for tenderness and swelling. A value of 2.6 and below is evaluated as remission, between 2.6-3.2 is considered low disease activity, between 3.2-5.1 is moderate activity and a value above 5.1 is high disease activity (24). In this study, the level of disease activity was determined using this score during physical examination.

Numerical pain assessment scale: This scale, which aimed to assess the severity of patient pain, was used to explain the pain in numbers. On the scale, a score of 0 indicates no pain and 10 confers excruciating pain (25).

Health assessment questionnaire (HAQ): The HAQ was developed by Fries et al. in 1980 to evaluate the physical limitations of patients with RA. It gauges activities of daily living consisting of 20 items in 8 sections. Each item is scored between 0-3 (0: no difficulty at all, 1: some difficulty, 2: great difficulty, 3: cannot do it at all). The scale was adapted to our society and Cronbach's alpha coefficient was 0.97 (26).

SF-36 quality of life scale: SF 36 is one of the most common metrics used to measure quality of life. It was developed by Ware et al. in 1992. Turkish validity and reliability study of this scale was performed by Koçyigit et al. (21) The short form of the scale consists of 36 items and 8 subscales, which are: physical function, social function, mental health, physical role limitations, emotional role limitations, vitality/energy, pain, and general health perception. Subscales evaluate health between 0 and 100, with a score of 0 indicating poor health and a score of 100 showing good health. Koçyigit et al. (21) found that Cronbach's alpha values of the subscales were between 0.73-0.76.

Statistical Analysis

A statistics package program was used in the analysis of data obtained in the study. Shapiro-Wilk test was used to examine the conformity of quantitative variables to normal distribution and it was determined that the quantitative variables were not normally distributed. The summary values of the non-normally distributed quantitative variables were shown as the median (Q1-Q3). Intergroup distributions of quantitative variables with no normal distribution were compared with Kruskal-Wallis and Mann-Whitney U tests. Qualitative variables were expressed with frequency and percentage, and the relationship between qualitative variables was evaluated with the pearson chi-square test. Spearmen's test was used to evaluate the correlation between variables. Results with a p-value of <0.05 were considered significant.

Ethical Approval

Ethics committee approval dated 15.05.2018 with number 17 was obtained from the non-interventional ethics committee of a university and written consent from the relevant institution. The researchers informed all patients about the study and obtained written consent from them that they wanted to participate in the study. The patients were told that their participation in the study was entirely at their own discretion and that they could refuse to participate or withdraw from the study at any time. When they wanted to withdraw from the study, they were informed that the treatment planned by their physician would not be interrupted or changed.

Results

Patients' Sociodemographic and Medical Characteristics

When the sociodemographic and medical characteristics of the patients participating in the study were compared, there were statistically significant differences in all three groups in terms of gender, education level, profession, receiving care from family members, employment status, social security, smoking, hypertension, diabetes mellitus, chronic kidney disease, and coronary artery disease (p<0.05) (Tables 1, 2). More than half of the patients in all three groups were female (51.3%) and primary school graduates (56.8%), the majority were married (76.9%),

Table 1. Distribution of socio-demographic characteristics of patients according to groups

Socio-demographic characteristics		Adult patients with RA		Elderly patients with RA		Elderly non-RA patients		p	
		Median (Q1-Q3)		Median (Q1-Q3)		Median (Q1-Q3)		p	
Age		56 (51-62)		70 (66-73.5)		71 (66.5-75.5)		<0.001	
		n	%	n	%	n	%	X²*	p
Gender	Female	64	83.1	53	69.7	39	51.3	17.949	**<0.001**
	Male	13	16.9	23	30.3	37	48.7		
Marital status	Married	62	79.6	57	75	57	74.1	1.835	0.766
	Single	15	19.5	19	25	19	25		
Education level	Literate	6	7.8	11	14.5	22	28.9	33.843	**<0.001**
	Primary school	39	50.6	50	65.8	41	53.9		
	Secondary school	9	11.7	7	9.2	5	6.6		
	High school	14	18.2	3	3.9	1	1.3		
	University	9	11.7	5	6.6	7	9.2		
Receiving care from family members	Yes	9	11.7	21	27.6	50	65.8	51.921	**<0.001**
	No	68	88.3	55	72.4	26	34.2		
Caring for family members	Yes	26	33.8	19	25	17	22.4	2.765	0.251
	No	51	66.2	57	34.1	59	77.6		
Job	Officer	10	13	0	0	2	5.2	40.899	**<0.001**
	Employee	9	11.7	2	2.6	0	0		
	Retired	15	19.5	32	42.1	39	51.3		
	Self-employment	4	5.2	1	1.3	4	5.3		
	Housewife	38	49.4	40	52.6	31	40.8		
	Farmer	1	1.3	1	1.3	0	0	27.488	
Employment status	Yes	19	24.7	2	2.6	2	2.6		**<0.001**
	No	58	75.3	74	97.4	74	97.4	18.429	
Social security	Yes	70	90.7	75	98.7	68	89.5		0.018
	No	7	9.1	1	1.3	8	10.5		
Income status	Income does not meet the expenditure	26	33.8	16	21.1	23	30.3	7.574	0.108
	Income is equal to the expenditure	44	57.1	57	75	51	67.1		
	Income meet the expenditure	7	9.1	3	3.9	2	2.6		
Total		77	100	76	100	76	100		

*Pearson chi-square test, RA: Rheumatoid arthritis

90% were unemployed (Table 1). The rate of smoking was higher in adult patients with RA (23.4%). The rates of hypertension (53.9%), diabetes mellitus (53.9%), chronic kidney disease (18.4%) and coronary artery disease (23.7%) were higher in elderly non-RA individuals (Table 2). The median ages of adult patients with RA, elderly patients with RA and elderly non-RA individuals were 56 (51-62), 70 (66-73.5) and 71 (66.5-75.5), respectively.

The median durations of disease in adult and elderly patients with RA were 9 (5-15) and 14 (5-19.5) years, respectively. While adult patients with RA had been receiving treatment for an average of 8 years, elderly patients with RA had been receiving

treatment for an average of 12 years. The duration of disease and the treatments used were statistically different (p<0.05) but disease activity scores (DAS-28 score) and duration of treatment were similar (p>0.05) among the groups. Patients with RA in both groups mostly received antirheumatic therapy (47.6%) and biologic agents (22.2%) (Table 2).

Comparison of Patients' VAS, HAQ, and SF-36 Quality of Life Scale Scores

The severity of pain of the patients with RA in our study was moderate according to VAS scores, and the severity of pain of elderly non-RA individuals was statistically lower (p<0.001).

The HAQ score of elderly non-RA individuals was significantly higher than that of the patients with RA. According to this result, it was determined that the physical condition of the elderly non-RA individuals was statistically worse than the patients with RA (p=0.01). It was determined that, there was a significant difference between the groups in terms of the SF-36 Quality of Life scale scores for physical role limitations, physical function, social functionality and mental health subscale (p<0.05). Adult patients with RA had significantly higher physical functionality and physical role limitation scores than elderly patients with RA and non-RA patients. The social functionality score of elderly non-RA individuals was lower than that of adult and elderly patients with RA, and their mental health score was also lower than that of elderly patients with RA (p=0.006) (Table 3).

Table 2. Medical characteristics of patients by groups

Medical characteristics			Adult patients with RA		Elderly patients with RA		Elderly non-RA patients		Total		X²*	p
			n	%	n	%	n	%				
Smoking habit	Yes		18	23.4	9	11.8	5	6.6	32	14	9.408	0.009
	No		59	76.6	67	88.2	71	93.4	197	86		
Alcohol habit	Yes		3	3.9	4	5.3	9	11.8	16	7	4.236	0.120
	No		74	96.1	72	94.7	67	88.2	213	93		
Other chronic disease	Hypertension	Yes	16	20.8	35	46.1	41	53.9	92	40.2	19.142	<0.001
		No	61	79.2	41	53.9	35	46.1	137	59.8		
	Diabetes mellitus	Yes	12	20	10	13.2	41	53.9	63	26.6	33.437	<0.001
		No	65	84.4	66	86.8	35	46.1	166	72.4		
	Chronic kidney disease	Yes	4	5.2	5	6.6	14	18.4	23	10	8.917	0.012
		No	73	94.8	71	93.4	62	81.6	206	90		
	Coronary artery diseases	Yes	2	2.6	9	6.6	18	23.7	25	10.9	19.689	<0.001
		No	75	97.4	71	93.4	58	76.3	204	89.1		
	COPD	Yes	2	2.6	11	14.5	9	9.3	22	6.6	3.069	0.216
		No	75	97.4	65	85.5	69	90.7	214	93.4		
	Osteoarthritis	Yes	1	1.3	2	2.6	0	0	3	1.3	2.036	0.361
		No	76	98.7	74	97.4	76	100	226	98.7		
Treatment	NSAIDs	Yes	1	1.3	4	5.3	-	-	5	2.2	231.846	<0.001
		No	76	98.7	72	94.7	-	-	148	64.6		
	Anti-rheumatic drugs	Yes	59	76.6	50	65.8	-	-	109	47.6	232.280	<0.001
		No	18	23.4	26	34.2	-	-	44	19.2		
	Steroids	Yes	4	5.2	10	13.2	-	-	14	6.1	233.367	<0.001
		No	73	94.8	66	86.8	-	-	139	60.7		
	Biological agents	Yes	12	15.6	22	28.9	-	-	34	22.2	244.084	<0.001
		No	65	84.4	54	71.1	-	-	119	77.8		
			Median (Q1-Q3)		**Median (Q1-Q3)**		-		**Mann-Whitney U test**			P
Duration of disease (year)			9 (5-15)		14 (5-19.5)		-		2380.5			0.046
Duration of treatment (year)			8 (4-16)		12 (5-17)		-		2,551			0.170
DAS28 score			3.04 (2.55-3.9)		3.24 (2.59-4.03)		-		2622.5			0.268
Total			77	100	76	100	76	100	**229**			100

*Pearson chi-square test, RA: Rheumatoid arthritis

Table 3. The distribution of HAQ, VAS and SF-36 quality of life subscale scores of patients according to groups

Scale scores		Groups			Kruskal Wallis test	p*
		Adult patients[a] of RA	Elderly patients[b] with RA	Elderly non-RA patients[c]		
		Median (Q1-Q3)	Median (Q1-Q3)	Median (Q1-Q3)		
VAS		5 (4-7)	5 (1.25-7)	2 (0-5)	17.896	**<0.001**
		a-c: 0.01 b-c: <0.001				
HAQ		0. 7(0.175-1.15)	0.65 (0.15-1.23)	1.32 (0.21-2.47)	14.622	**0.001**
		a-c: 0.02 b-c: 0.04				
	SF-36 subscales					
Physical functioning		50 (30-65)	35 (16.25-60)	20 (0-53.75)	24.965	**<0.001**
		a-c: <0.001 b-c: 0.01				
Role physical		25 (0-75)	0 (0-50)	0 (0-25)	8.823	**0.012**
		a-c: 0.01				
Bodily pain		45 (32-67.5)	45 (32.5-67.5)	45 (22.5-75.6)	0.262	0.877
General health		40 (25-48.1)	40 (21.25-55)	35 (20-55)	0.455	0.796
Vitality		50 (30-60)	50 (35-55)	40 (25-55)	3.586	0.166
Role emotional		0 (0-66.6)	0 (0-33.3)	0 (0-33.3)	2.880	0.237
Social functioning		50 (37.5-75)	62.5 (50-75)	37.5 (25-62.5)	25.922	**<0.001**
		a-c: <0.001 b-c: <0.001				
Mental health		56 (40-64)	52 (48-68)	48 (36-60)	10.356	**0.006**
		b-c: 0.005				

RA: Rheumatoid arthritis

Correlation between Patients' Sociodemographic, Disease and Treatment Characteristics and VAS, HAQ, and SF-36 Quality of Life Scale Scores

In our study, there was a weak, negative significant correlation between age and VAS score (r=-0.160, p=0.015), physical function (r=-0.301, p<0.001), physical role limitations (r=-0.184, p:0.005), emotional role limitations (r=-0.151, p=0.023) and social functionality (r=-0.168, p:0.011) subscale scores. There was a weak positive significant correlation between the patient's age and HAQ score (r=0.199, p=0.002). There was a weak, positive highly significant correlation between the patient's VAS score and HAQ score (r=-0.288, p<0.001), a weak negative significant correlation between VAS score and physical role limitations (r=-0.177, p=0.007), vitality (r=-0.177, p=0.007), social functionality (r=-0.188, p=0.004) and general health perception (r=-0.288, p<0.001) subscale scores. A moderate, very significant negative correlation was found between VAS score and pain subscale score (r:-0.485, p<0.001). There was a strong negative correlation between patient's HAQ score and physical function subscale scores (r=-0.721, p<0.001), a moderate, highly significant negative correlation between HAQ score and physical role limitations (r=-0.457, p<0.001), vitality (r=-0.434, p<0.001), social functionality (r=-0.597, p<0.001), pain (r=-0.588, p<0.001) and general health perception (r=-0.463, p<0.001) subscale scores. Also, a weak very significant negative correlation between patient's HAQ score and emotional role limitations (r=-0.339, p<0.001) and mental health (r=-0.253, p<0.001) subscale scores was determined (Table 4).

The duration of disease in patients with RA was weakly positively correlated with HAQ score and negatively correlated with physical function, physical role limitations and emotional role limitations subscale scores. The duration of treatment in patients with RA, on the other hand, was weakly positively correlated with HAQ score, but weakly negatively correlated with physical function and emotional role limitations subscale scores. There was a highly significant positive correlation between the DAS-28 score and VAS score of the patients with RA (r=0.708, p<0.001), a moderate positive significant correlation between DAS-28 and HAQ scores, and a weak negative significant correlation between the DAS-28 score and physical function (r=-0.193, p=0.017), physical role limitations (r=-0.457, p<0.001), social functionality (r=-0.233, p=0.004) and pain (r=-0.395, p<0.001) scores (Table 5).

Discussion

Within the scope of the study, pain, quality of life and functional status of elderly patients with RA were all evaluated by comparing with adult patients with RA and elderly non-RA patients. Results showed that the severity of pain was lower in elderly non-RA patients than in adult and elderly patients with RA, but was not different between adult and elderly patients with RA. The fact that the severity of pain scores of patients in both RA groups were higher than the elderly individuals with chronic diseases other than RA was due to the primary characteristic of RA, pain. As a matter of fact, genetic predisposition, comorbidities such as osteoarthritis, fibromyalgia, depression, acute inflammatory

Table 4. Correlation of age, VAS, HAQ and SF-36 Quality of Life subscale scores of patients*

Characteristics		VAS	HAQ	Physical functioning	Role physical	Role emotional	Vitality	Mental health	Social functioning	Bodily pain	General health
Age	r	-0.160	0.199	-0.301	-0.184	-0.151	-0.032	-0.056	-0.168	-0.054	-0.016
	p	**0.015**	**0.002**	**<0.001**	**0.005**	**0.023**	0.625	0.398	**0.011**	0.415	0.811
VAS	r	1.000	0.288	-0.195	-0.177	-0.133	-0.177	-0.099	-0.188	-0.485	-0.288
	p	-	**<0.001**	0.003	**0.007**	0.087	0.007	0.135	**0.004**	**<0.001**	**<0.001**
HAQ	r	0.288	1.000	-0.721	-0.457	-0.339	-0.434	-0.253	-0.597	-0.588	-0.463
	p	**<0.001**	-	**<0.001**	**<0.001**	**<0.001**	**<0.001**	**<0.001**	**<0.001**	**<0.001**	**<0.001**

*Spearman's rank correlation coefficient test

Table 5. Correlation of disease duration, treatment duration, DAS-28 score, HAQ score and Quality of Life subscale scores of patients with RA*

Characteristics		VAS	HAQ	Physical functioning	Role physical	Role emotional	Vitality	Mental health	Social functioning	Bodily pain	General health
Duration of disease (year)	r	0.023	0.325	-0.274	-0.166	-0.183	-0.097	-0.041	-0.129	-0.076	-0.143
	p	0.777	**<0.001**	**<0.001**	**0.040**	**0.023**	0.233	0.614	0.112	0.350	0.078
Duration of disease (year)	r	0.049	0.266	-0.214	-0.151	-0.186	-0.071	-0.013	-0.118	-0.064	-0.068
	p	0.549	**0.001**	**0.008**	0.063	**0.021**	0.384	0.878	0.146	434	401
Das-28 score	r	0.708	327	-0.193	-0.457	-0.129	-0.065	-0.059	-0.233	-0.395	-0.122
	p	**<0.001**	**<0.001**	**0.017**	**<0.001**	0.113	428	471	**0.004**	**<0.001**	0.132

*Spearman's rank correlation coefficient test, RA: Rheumatoid arthritis

exacerbations, chronic inflammation, structural damage, changes in the transmission and perception of pain and pain itself are observed in patients with RA due to the effect of coping mechanisms (27). In our study, pain scores increased as the disease activity of RA increased (r=0,708, p<0,001). Strand et al. (28) stated that patients with RA described any day they spend pain-free as a "good day", emphasizing that this situation was rare. Lisitsyna et al. (29) stressed that the severity of pain in patients with RA was high in those using conventional disease-modifying antirheumatic drugs (DMARDs), and Simon et al. (30) stated that treatments that inhibited the JAK/STAT pathway provided successful pain management. In our study, the treatments of adult and elderly patients with RA were statistically different and antirheumatic treatment was more common in the adult group, whereas steroid, biologic agents and non-steroidal anti-inflammatory drugs were more common in the elderly RA group.

According to the results of the HAQ, the group with less physical limitations in activities of daily living was elderly patients with RA, whereas limitations were more common in elderly non-RA individuals. In our study, it was thought that this was caused by a high number of chronic diseases in elderly non-RA individuals and poor health conditions which required hospitalization and treatment in the internal diseases clinic. As seen in Table 2, although the number of patients with chronic kidney disease, coronary artery disease, diabetes and hypertension were higher in both elderly groups compared to the adult RA group, these diseases were more common in the elderly non-RA group (p<0.05). One of the reasons for the low functionality in elderly individuals without RA may be that geriatric syndromes are very common in the elderly in general. Multiple comorbidities are difficult to manage in elderly patients and this increases susceptibility to geriatric syndromes (31,32) and negatively affects functional capacity (33).

In our study, although the mean RA disease activity scores in both RA groups were similar, the disease activity was moderate in adult patients with RA and mild in elderly patients with RA according to the criteria used to evaluate the DAS-28 scores. In addition, although the number of chronic diseases was higher in the elderly RA group, the level of physical limitations in activities of daily living was higher in adult patients with RA than in the elderly RA patients. The adult RA group was more active in daily life and participated in social and business life more than the elderly RA group. As a matter of fact, in our study, it was seen that adult patients with RA were more active workers than elderly patients with RA, and their functionality worsened as disease activity score increased. It was thought that both this situation and moderate disease activity level may have contributed to the perception that adult patients with RA were more limited in daily activities compared to elderly patients with RA. Moreover, it was predicted in the study that sociodemographic factors might also affect the level of limitation in activities of daily living because the number of patients in the adult RA group who had been giving care to their family members was higher than in the elderly RA group. Independent of the disease, females are generally expected to organize housework and take more responsibility in the care of children and the elderly as well as maintain an active work life. Therefore, expecting fulfilling these duties and responsibilities may lead to the perception of more restriction in activities of daily living due to the effect of rheumatoid arthritis.

When the perceptions of patients regarding quality of life were evaluated, the median scores of the adult patient group on quality of life subscales were higher compared to the other two elderly patient groups. It was found that quality of life decreased as age increased. An increase in the number of chronic diseases in the elderly (34), use of multiple medications, decreased cognitive functions (4), emotional problems (4,35,36), physical inactivity (37), and withdrawal from social life (38) are all factors reducing the quality of life of the elderly group. In our study, similar to the literature, the number of chronic diseases and the number of medications used due to chronic diseases were high and the number of active workers was low in the elderly population.

In the study, it was observed that the level of physical function, one of the subscales of quality of life, in the elderly non-RA patient group was lower than in both RA groups. It was thought that this difference observed especially in the two elderly groups of which mean ages were very close to each other, was due to the fact that the elderly non-RA group had more chronic kidney disease, diabetes, coronary artery disease and that the general condition of these patients was poor and required inpatient treatment, rather than old-age related physiological and psychosocial changes. While susceptibility to geriatric syndromes increases due to the presence of multiple comorbidities, functional capacity decreases (31,33). Geriatric syndromes have been shown to be associated with lower quality of life in several different elderly populations (32,39). In the study, physical role limitations, social functionality, and mental health levels of the elderly non-RA patients were statistically significantly lower than adult patients with RA. Moreover, the social functionality level was better in the elderly patients with RA than in the elderly non-RA patients but their pain, general health status, vitality, and emotional role limitation levels were not statistically different.

As disease activity increases in RA, functional limitation increases. For this reason, it is important to stratify adult and elderly RA groups as remission and low, moderate or high disease activity according to the scores obtained from DAS-28 in order to evaluate the physiological changes and comorbid conditions brought by old age and the effect of RA on functional status. The limitation of our research was that this stratification could not be made.

Study Limitations

The descriptive type of the research prevents the generalization of the results to the population. Research results are based on patients' self-report, which may cause bias in elderly patients' recall of their health status.

Implications

Although the disease activity of elderly patients with RA is lower than adults, these patients have more chronic diseases and have a lower quality of life. For this reason, it is recommended that healthcare professionals evaluate chronic conditions in patients and their quality of life as well as disease activity in elderly patients with RA, and offer individualized health care.

Conclusion

In the study, elderly patients with RA showed a mild disease activity and more chronic diseases than adult patients with RA. Compared to adult patients with RA, elderly patients with RA had fewer physical limitations in activities of daily living and their severity of pain was not different. On the other hand, the physical and social functionality of elderly patients who had received treatment at the hospital due to a chronic disease other than RA were lower, and the quality of life of adults was better compared to the elderly. When these results are considered, it is recommended to consider disease activity, comorbid conditions, physical and psycho-social capacities rather than age in planning the care of patients.

Ethics

Authorship Contributions

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