LIFE QUALITY OF PATIENTS WITH RHEUMATOID ARTHRITIS ACCORDING TO THE LEVEL OF PAIN

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Abstract:

This is a transversal (cross-sectional) descriptive study. The aim of the study is to evaluate the quality of life of patients with rheumatoid arthritis

Objectives: To identify the level of pain related to daily activities in patients with RA according to gender and age groups.

Methodology: The data collection was conducted in January-May 2019. The sample was randomly selected. In this study, there were 70 patients with RA. These patients were provided an internationally standardized questionnaire, administered by us that measures the level of pain experienced by the patient in carrying out daily activities. Questionnaires with patients were conducted at QSUT "Mother Theresa". Before the interview began, patient and family consensus were obtained. To analyze the statistical data, SPSS Version 19 and Excel 2010 were used. The Pearson Correlation for IC=99%, $p < 0.01$ was applied.

Results: The average age of patients is 55.2 years old, the minimum age is 24 years old, the maximum age is 72 years old. In a distribution by age groups, it turns out that 59% of these patients are aged 50-59 years old. From this study it is seen that the highest percentage of patients with RA is Tirana (45%). We found that women are not only more affected than men by rheumatoid arthritis, specifically 84% of women, but also women have much worse quality of life due to very severe pain from RA. Of our surveyed group, 20.3% of affected females have very poor quality of life but no affected males have very poor quality of life from RA pain. Men in 100% of cases have poor quality of life from RA pain compared to 72.9% of women. The age group experiencing the most severe pain and having a very bad quality of life is 20-49 year olds with 25% of the cases. The age group ≥ 70 years old has the worst quality of life from RA pain in 100% of the cases studied.

Conclusions: 77% of these patients have poor quality of life because of pain associated with RA. The FSI for pain resulted in 0.25, 0.39 for addiction and 0.26 for difficulty.

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Introduction

Rheumatoid arthritis (RA) is an autoimmune disease that causes chronic inflammation of the joints and other areas of the body, it is a chronic disease characterized by the onset and development of the disease (William C. Shiel Jr, Melissa Conrad Stoppler, Catherine Burt Driver, 2019). The prevalence of RA is ~ 0.8% of the total population. Females are about three times more likely to be affected than males. Prevalence increases with age and differences between females or males decline with age. RA is seen in all the world and affects all ethnicities. The pathology was more common during the 4-5 decades of life in which almost 80% of all patients develop the disease around the age of 35-50 years old. Recent data indicate that the incidence of RA can be decreased; the disease appears to be in decline, although it is not clear whether this reflects the immediate therapeutic interventions underway towards the disease. The cause of rheumatoid arthritis remains unknown (Kasper D, Fauci A, Longo D, 2005) (Jenkins.J, 2009). Clinical Rheumatoid arthritis is related with the power of synovial inflammation to cause cartilage damage and bone erosion, including systemic changes to this system. The most common manifestation of RA is pain in the affected joints that is aggravated by movements. Joint stiffness in the mornings that lasts more than an hour is one of the main characteristics of inflammatory arthritis. Other signs include weakness, anorexia and weight loss, arthralgia, myalgia, reduction in muscle strength, fatigue, sub febrile fever, depressive states, and anxiety (William C. Shiel Jr, Melissa Conrad Stoppler, Catherine Burt Driver, 2019). Some patients may simply experience short-term joint pain, with minimal overall damage but most have a more severe form called "relentless progressive polyarthritis" associated with visible functional damage (Kasper D, Fauci A, Longo D, 2005). The efficacy of RA is different and it is difficult to predict the progression of the disease for a single patient. The first therapeutic interventions seem to have attenuated the clinical

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course of RA with consequent less persistent inflammation. The presence of functional disability, this associated with persistent inflammation that is aggravated by advancing age and low socioeconomic status, implies the presence of the disease at a stage of progression resulting in the development of progressive joint abnormalities that is characterized by disability and the inability of the individual to carry out their own personal activity. In the early stages of RA, disability is more associated with pain and inflammation, and later in the course of the disease, structural damage to the joint structures plays a major role. The objectives of RA therapy are pain relief, reduction of inflammation, protection of joint structures, and the maintenance of function and control of systemic involvement. Patient and family education is an important component of the treatment plan to help those involved and, in turn, become aware of the potential impact of the disease and adapt their lifestyles to maximize enjoyment and to minimize stress.

The quality of life of these patients decreases. This is also expressed by: interruption of comfort, congestion associated with the inflammatory process, interruption of physical activity due to the limitation of joint activity related to pelvic stiffness, fatigue, and pain following the inflammatory process. Alternations in nutrition, general weakness, hand deformities that prevent the patient from preparing and receiving food. Deficit in self-care related to articulation deformities, pain, fatigue, synovial stiffness (Jenkins.J, 2009). Nursing care for patients with RA is very important because it directly affects the progress of the disease, positively influencing the progress of the disease when this assistance is adequately provided. In order to obtain the most efficient assistance, it is necessary to obtain precise data on the onset of the disease, the complaints to which the patient refers, the different forms and methods that the patient feels pain relief, which contributes greatly to a positive performance of the disease. Based on this data, attention is therefore paid to the proper care of patients (Vera M, 2014).

Material and methods

This is a cross-sectional descriptive study that aims to record the quality of life in patients with rheumatoid arthritis. Data collection was conducted in the period of January - May 2019. The sample was randomly selected. This study included 70 patients with rheumatoid arthritis. Patients with rheumatoid arthritis were given an international standardized questionnaire. The questionnaire contained 18 questions through which we obtain the necessary information on the patients' level of pain in their daily activities with rheumatoid arthritis.

The functional condition index (FSI) was designed to assess the functional status of patients with rheumatoid arthritis (Jette AM, Deniston OL., 1978). Designed both as a clinical tool and as an evaluator, the scale measures the level of pain when performing different activities (Jette AM., 1980). The questionnaires were conducted with patients at Tirana University Health Center "Mother Teresa". Prior to the start of the interview, the consent of the patient and family were obtained.

The FSI was developed to evaluate a pilot program for arthritis (PGAP) that sought to improve the quality of life of elderly patients with arthritis (Deniston OL, Jette A., 1980). The goals of the program were to prevent disability, restore activity, reduce pain and promote social and emotional adjustment (Jette AM., 1980).

The module should be completed in about 5-10 minutes. It was found that the FSI had a sensitivity of 92% and a specificity of 89%. The validity and reliability of the instrument were supported through clinical practice and research. For statistical analysis we used SPSSVersion19 and Microsoft Office 2010. The Pearson correlation coefficient was applied for $IC = 99\%$, $p < 0.01$.

Results and discussion

In this study, 70 patients with rheumatoid arthritis were interviewed in the department of rheumatology at the University of Tirana "Mother Teresa" hospital. Of these patients, 59 (84%) were females and 11 (16%) were males, which clearly shows that RA affects females more than males.

The average age of the participating patients with rheumatoid arthritis was 55.2 years old. Their minimum age is 24 years old and the maximum age is 72 years old, $STDEV = \pm 8.6$ years. A distribution by age group shows that 59% of the patients are aged between 50 and 59 years old, 26% of patients are aged between 60 and 69 years old, 11% have an age between 20 and 49 years old and only 4% of patients are ≥ 70 years old. The age group most affected is between 50 and 59 years old. The study also shows that the district with the highest percentage of sampled patients with rheumatoid

arthritis is Tirana with 45% of patients with rheumatoid arthritis coming from there, followed by Durres with 14%, and Elbasan with 11%. In the city of Shkodra we have 8% of sampled patients with rheumatoid arthritis, 6% in Fier and Lezha, 3% in Kukës, Pogradec, Erseka and the region with the lowest number of patients is Gjirokastra.

Table 1: Quality of life affected by pain with RA

		None	Mild	Moderate	Severe difficulty	Very severe difficulty
1	Walking inside	0%	6%	10%	38%	46%
2	Climbing up stairs	1%	6%	10%	34%	49%
3	Rising from a chair	0%	5%	23%	46%	26%
4	Writing	10%	41%	19%	20%	10%
5	Opening a container	6%	13%	16%	31%	34%
6	Dialing a phone	7%	12%	31%	12%	3%
7	Putting on pants	3%	8%	19%	50%	20%
8	Buttoning a shirt/blouse	9%	11%	39%	31%	10%
9	Washing all parts of the body	3%	3%	13%	38%	43%
10	Putting on a shirt/blouse	2%	10%	24%	47%	17%
11	Vacuuming a rug	0%	0%	10%	9%	81%
12	Reaching into low cupboards	0%	6%	3%	23%	68%
13	Doing laundry	0%	0%	0%	14%	86%
14	Doing yard work	0%	0%	1%	10%	89%
15	Performing your job	0%	4%	16%	14%	66%
16	Driving a car	0%	10%	13%	24%	53%
17	Attending meetings/appointments	1%	7%	23%	42%	27%
18	Visiting with friends and relatives	1%	9%	23%	40%	27%

Source: Authors

In Table 1, we can see that 46% of patients with rheumatoid arthritis have very pronounced pain when walking, 38% have intense pain, 10% have a moderate level of pain, only 6% have slight pain during walking and there are no patient with RA that does not feel pain during walking.

Furthermore, the data shows that 49% of patients with rheumatoid arthritis have a very strong pain when climbing stairs, 34% have intense pain, 10% have moderate pain levels, 6% experience mild pain and only 1% do not feel any pain when climbing stairs (see table 1).

To get up from a chair, 46% of patients with rheumatoid arthritis experience very strong pain, 26% have strong pain, 23% experience mild pain, 5% moderate pain and there are no patients who do not feel pain when they get up from a chair (see table 1).

41% of patients with RA have mild pain, 20% have strong pain, 19% have moderate pain, 10% have very strong pain and 10% have no pain when writing (see table 1).

When opening a container 34% of patients have very strong pain, 31% have strong pain, 16% have moderate pain, 13% have mild pain and only 6% have no pain (see table 1).

47% of patients with RA have mild pain, 31% have moderate pain, 12% have strong pain, 3% have very strong pain and 7% have no pain when they respond to cell phone calls (see table 1).

Putting on trousers, 50% of patients with RA have severe pain, 20% have very strong pain, 19% have moderate pain, 8% have mild pain, and only 3% have no pain (see table 1). When buttoning a shirt/blouse, we see that 39% of patients have moderate pain, 31% have intense pain, 11% have mild pain, 10% have very strong pain and only 9% do not feel pain.

When washing all parts of their body, 43% of patients with RA feel very intense pain, 38% have strong pain, 13% have moderate pain, 3% have mild pain and 3% have no pain (see table 1).

Wearing a shirt or blouse, 47% have very severe pain, 24% have moderate pain, 17% have very strong pain, 10% have slight pain and only 2% have no pain. When cleaning the carpet 81% of patients with RA have very intense pain, 10% have moderate pain and 9% have strong pain.

When reaching for items in lower cupboards, 68% of patients have no pain, 23% have mild pain, 6% have strong pain and 3% have moderate pain levels.

When washing clothes, 86% of patients with RA experienced very intense pain and 14% had severe pain.

Doing yard work 89% of patients experienced very severe pain, 10% had severe pain and only 1% had moderate pain.

66% of patients have severe pain, 16% have moderate pain, 14% have severe pain and only 4% have mild pain while practicing their profession.

While driving a car, 53% of patients with RA have very severe pain, 24% have severe pain, 13% have moderate pain levels and only 10% have slight pain.

42% of patients with RA have severe pain when attending meetings, 27% have very severe pain, 23% have moderate pain, 7% have mild pain and only 1% doesn't feel any pain while attending meetings.

40% of patients with RA have intense pain, 27% have very intense pain, 23% have moderate pain, 9% have mild pain and only 1% have no pain when they go out to visit friends.

Figure 1: Distribution by score related to quality of life in regard to pain

Based on the study, 77% of patients with Rheumatoid Arthritis have a poor quality of life from experiencing pain. The most severe pain is experienced in daily living activities such as wiping carpets, washing clothes, and cleaning the yard. These are most noticeable by women who are more affected than men by RA. Walking and climbing the stairs is also seen as having a very pronounced difficulty. Of the 70 patients who were interviewed, 17% reported a very poor quality of life with a marked reduction in daily activities from experiencing severe pain, 6% of these patients have poor quality of life and none of them develop good or very good quality of life from persistent rheumatoid arthritis pain (see figure 1).

Figure 2: Quality of life related to pain by gender

Based on the results of the study we found that women are not only more affected than men by rheumatoid arthritis, specifically 84% of women and 16% of men, but also women have much worse quality of life due to very severe pain from RA. 20.3% of affected females have very poor quality of life but no affected males have very poor quality of life from AR pain. Men in 100% of cases have poor quality of life from AR pain compared to 72.9% of women. Only 6.8% of women have poor quality of life but there is no female or male with AR who has good or very good quality of life (see figure 2).

Figure 3: Quality of life related to pain by age group

Source: Authors

The results of the study show that the age group experiencing the most severe pain and having a very bad quality of life is 20-49 year olds with 25% of the cases, followed by the age group 50-59 years old with 22% of the cases.

The age group ≥ 70 years old has the worst quality of life from AR pain in 100% of the cases studied, followed by the age group 60-69 years in 88.9% of cases.

We also see that the age group with poor quality of life is again the age group of 20-49 with 25% of cases. The results of the study clearly show how AR pains affect quality of life and we have no cases of good or very good quality of life (see figure 3).

Table 2: Correlations between age, sex and level of pain

	Age-pain	Pearson Correlation	FSI_Pain	
		Sig. (2-tailed)	-.138	
		N	.255	
	Gender-pain	Pearson Correlation	.112	
		Sig. (2-tailed)	.357	
		N	70	

Source: Authors

From table 2 we note that there is a statistically insignificant association between age, gender and pain. As a result, with increasing age, the quality of life decreases and the level of pain increases, which reflects the decrease in the total score. From the Pearson correlation we have $r = -0.138$, $p = 0.255$. Regarding gender, we see the same thing, but the pain is experienced more by women and is referred to as a very bad quality of life. From the Pearson correlation we have $r = -0.112$, $p = 0.357$.

Table 3: Correlations between age, sex and difficulty

	Age_Difficulty	Pearson Correlation	FSI_difficulty	
		Sig. (2-tailed)	-.092	
		N	.449	
	Gender_Difficulty	Pearson Correlation	.115	
		Sig. (2-tailed)	.342	
		N	70	

Source: Authors

From table 3 we note that we have a statistically weak link between age, gender and difficulty in performing daily activities. From this we can see that with increasing age the level of quality of life decreases and the difficulty for basic activities increases which is reflected in the decrease of points in total. From the Pearson correlation we have $r = -0.92$, $p = 0.449$.

Regarding gender, we notice the same thing, but the functional difficulty in women is greater, so they have more dependence and is referred to as a very bad quality of life. This is also seen in the level of the FSI. From Pearson correlation we have $r = 0.115$, $p = 0.342$.

Conclusions

Based on the study data, it is observed that the highest percentage of patients with Rheumatoid Arthritis have very strong pain when walking, climbing stairs, and taking care of themselves.

They have very strong pain during daily activities such as cleaning the yard, washing clothes, reaching the lower cabinets. 77% of the sampled patients have bad quality of life due to Rheumatoid Arthritis pain. The age group experiencing the most severe pain and having a very poor quality of life is 20-49 years old with 25% of the cases, followed by the age group 50-59 years old with 22% of the cases. 20.3% of women affected by Rheumatoid Arthritis have a very poor quality of life

The help of a person or device is required to carry out daily activities.

The FSI for pain was 0.25 that correlates with foreign literature in the studies of various authors regarding the dependence that these patients have in their daily life. We confirm the alternative hypothesis that the quality of life in patients with Rheumatoid Arthritis is age-related, meaning that the older the patient, the worse the quality of life is. It is recognized that the quality of life is worse for women, but this is not statistically significant.

Most patients have very severe difficulties when walking, climbing stairs and taking care of themselves. Also, they have great difficulties when performing daily activities such as cleaning the yard, washing clothes and reaching the lower cupboards. 73% of these patients have poor quality of life due to difficulty in carrying out daily life activities such as practicing their profession, driving, taking care of themselves, getting dressed or washing their bodies.

FSI for difficulty had a result of 0.26 which correlates with the foreign literature in studies done by various authors regarding difficulties that these patients have in their daily lives.

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