Impact of age on the clinical aspects and management of patients with rheumatoid arthritis, among adults in Saudi Arabia

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Abstract

Background: Rheumatoid arthritis is a common chronic inflammatory disease; it is the most common inflammatory arthritis in Saudi Arabia.

Objectives: To explore the impact of age on the clinical aspects and management of patients with rheumatoid arthritis, among adults, in Saudi Arabia.

Methods: A cross-sectional survey was conducted, online, using Google form which was sent to patients with Rheumatoid arthritis, in Jeddah, Saudi Arabia. The total number enrolled was 122 patients. Data was collected using a predesigned questionnaire which provided information on the socio-demographic characteristics, age of onset of rheumatoid arthritis, comorbidities, symptoms and signs, and lines of management. Chi Square test of significance was used. The level of significance was 0.05.

Result: Rheumatoid Arthritis occurred in 41.8% of the patients before the age of 20 years, in 28.7% by the age of 20 to < 30 years, in 20.5% by the age of 30 to < 40 years, and in 9% by the age of 40 years and older. Autoimmune diseases, skin allergies, and intake of medication without doctor prescription, were significantly more common among those aged 36 to 46 years old ($p < 0.05$). Loss of appetite was common among those aged 16 to 25 years old ($p<0.5$). Cardiovascular diseases, burning in the mouth, neck pain, use of over the counter treatments, and use of biological treatment, were significantly more common among those aged 46 years or older ($p<0.05$). RF, anti-CCP, LFT, FRT, and CBC were the common investigations done, with no age differences. Although Cortisone, and methotrexate drugs were given more in those aged 46 years and over, no significant age differences were found. The majority of the patients did not visit the rheumatology clinics regularly.

Conclusion: Rheumatoid arthritis did not appear to be an old age disorder; it was common before the age of 20 years. Clinical picture and lines of management differed among different age groups. This evaluation raised questions for future studies and improved care for RA. Extrapolation of these differences, and also lack of access to care, may help health care providers to implement a promotional strategy to address this health care issue.

Key words: Rheumatoid arthritis, Age, clinical aspects, Saudi Arabia.

Introduction

Rheumatoid arthritis (RA) is a chronic progressive inflammatory disorder that causes disabling joint deformities. This can impose serious effects on a patient's overall wellbeing [1, 2].

The reported worldwide RA prevalence varies widely [3, 4]; the mean point-prevalence of RA was 0.56% (range 0.00% to 2.70%) between 1986 and 2014. The period-prevalence was 0.51% (range 0.05% to 1.9%) between 1955 and 2015. RA point- and period-prevalence was higher in urban settings than rural settings, (0.69% vs 0.48%) and (0.54% vs 0.25%), respectively [5]. There is a wide variability in the forms of presentation of RA. The age of onset of RA, and age of the patients seem to be critical factors in the clinical spectrum and lines of management; there are equivocal reports about it in several studies [6 - 13]. The prevalence of RA in the Saudi Arabian population was reported to be about 0.02% in a study in the Central region [14], which is comparable to the overall world figures [15, 16]. Yet, descriptive data on RA patients in Saudi Arabia, like the rest of the region, is scarce [17]. This study aimed toexplore the sociodemographic characteristics, as well as comorbidities, and clinical aspects of RA among adult Saudi patients, and study its variation among different age groups.

Subjects and Methods

It was a cross-sectional study; where an online survey using Google form questionnaire, was sent via email to the patients with RA, in Jeddah, Saudi Arabia. Sampling method was a non probability convenient one. Sample size for the present study was determined using G*power software (α = 0.05, Power = 0.95, effect size = 0.5 and degree of freedom = 12). The sample size required was 104 patients [18]. The total number of patients enrolled was 122. Data was collected using a questionnaire which provided information on socio-demographic characteristics, medical history of comorbidities, symptoms and signs, investigations done within last year, and lines of management, as well as history of visits to rheumatology clinics in the last year.

Data analysis and statistical tests: Statistical Package for Social Sciences (IBM SPSS, version 23, Armonk, NY: IBM Corp.) was used. Chi square test of significance was used. The level of significance for this study was 0.05.

Results

The present study comprised 122 patients with doctor diagnosed RA (5.7% males, and 94.3% females). The age distribution of the studied subjects was as follows: 17.2% were 16 to 21 years; 33.6% were 26 to 35 years; 27% were 36 to 45 years; and 22.1% were 46 years and older. Among the studied patients, RA was diagnosed in 41.8% before the age of 20 years; in 28.7% by the age of 20 to less than 30 years; in 20.5% by the age of 30 years to less than 40 years; and in 9% by the age of 40 years and older. Table 1 displays the distribution of patients with RA according to age groups and sociodemographic characteristics and medical history. The majority of the patients were bachelor degree holders (50.8%), particularly, among those aged 36 to 46 years old ($p < 0.005$). A minority of the patients were smokers (7.4%), particularly among those aged 46 years or older; however, this difference was not statistically significant ($p < 0.346$). About 38% consumed a diet rich in vegetable, fruits and high fibers. However, no significant differences were found between different age groups ($p < 0.061$). Chronic diseases of the lung, cardiovascular system, kidney and skin were very low among patients with PA, with no significant differences between different age groups, except for CVD which was more encountered among those aged 46 year or older ($p < 0.05$). On the other hand, autoimmune diseases and inflammatory bowel diseases were of higher magnitude among patients with RA (13.9% and 19.7% respectively); particularly among those aged 36 to 46 years old for auto immune disorders ($p<0.004$). Family history of RA was encountered among 32.8% of the patients, with no significant differences between different age groups ($p > 0.05$). About 61% of the patients with RA were found to have enough information about RA, and no significant differences were found between age groups. The majority of the patients (91.0%) were admitted 1 to 2 times to hospital in the previous year. This was similar among all age groups. Table 2 reveals the distribution of patients with RA according to age groups and symptoms and signs and clinical disorders. The majority of patients (70.5%) suffered from stiffness upon waking up. This was similar in all age groups ($p > 0.05$). About one fifth of the patients suffered from fever; this was also common in all age groups ($p > 0.05$). Only 4% suffered from weight gain, and none of the RA patient suffered from weight loss ($p > 0.05$). Loss of appetite was encountered among 31.1% of the patients; it was more prominent among those aged 16 years to 25 years; this difference was statistically significant ($p < 0.05$). Burning in the mouth was found in 36.9% of the patients; it was significantly more common in those 46 years and over ($p <0.05$). Difficulty swallowing and ulcer in the mouth were encountered among 15% of the patients; it was common in all age groups ($p> 0.05$). Psoriasis and petechial rash were encountered among 4.1%, and 9.8% of the RA patients respectively. Neck pain was found in 54.1% of the patients, particularly among those aged 46 and older ($p <0.05$). Back pain was a common disorder in all age groups, and was encountered among 57% of the cases. ($p> 0.05$). Numbness and swelling of the joints were encountered among the patients with RA (46.7%, and 57.4% respectively); no age differences were found ($p >0.05$). Difficulty hearing was encountered in 17% of the cases, history of thyroid dysfunction in 9.8% of the cases, and pain and weakness of the muscles was encountered in over half of the patients (55.7%); however, no significant differences were detected between different age groups ($p >0.05$). Table 3 reveals types of investigations done on patients with RA. RF, anti-CCP, LFT, FRT, and CBC were the common investigations done, with no age differences ($p > 0.05$). Table 4 displays the symptoms and signs and medical management of the RA patients by age groups.

The majority of the RA patients (49.2%) visited RA clinics 1 – 2 times last year, particularly those aged 46 years and older. However the differences between age groups was not statistically significant (p > 0.05). The majority of patients use medication for RA (77%). This was similar in all age groups (p> 0.05). About 37% of the subjects used corticosteroids, and 48.4% used methotrexate. These were similar in all age groups (p > 0.05). About 67% of the subjects used pain killers other than NSAIDs. Only 19% of the subjects used over the counter treatments, particularly those older than 46 years (p<0.05). About 42% of the patients used biological treatment, mainly those older than 46 years old (p<0.05). Only 16% of the subjects admitted that they took medication without doctor prescription, particularly among those aged 36 to 46 years old (p<0.05). Complications due to RA medications were encountered among 36% of the patients, with no age significant differences (p > 0.05).

Table 1: Distribution of patients with RA according to age groups and sociodemographic characteristics and medical history.

Variable / category	Age groups in years					X2
	16 – No (%)	26 – No (%)	36 – No (%)	46 + No (%)	Total No (%)	(p)
How many times have you visited rheumatoid clinics in the last year?						
1-2 times	14 (66.7%)	20(48%)	15 (45.5%)	11(40.7%)	60(49.2%)	9.7 (0.370)
3-4 times	3(14.3%)	5(12.2%)	11 (33.3%)	8(29.6%)	27(22.1%)	
5-6 times	1(4.8%)	5(12.2%)	2(6.1%)	2(7.4%)	10(8.2%)	
More than 6	3(14.3%)	11 (26.8%)	5(15.2%)	6(22.2%)	25(20.5%)	
Do you use any medication?						
No	9(42.9%)	10 (24.4%)	6(18.2%)	11(40.7%)	28(23.0%)	7.3 (0.062)
Yes	12 (57.1%)	31 (75.6%)	27 (81.8%)	24(88.9%)	94(77.0%)	
Do you use cortisone?						
No	13 (61.9%)	29 (70.7%)	19 (57.6%)	16 (59.3%)	77 (63.1%)	1.6 (0.650)
Yes	8 (38.1%)	12 (29.3%)	14 (42.4%)	11 (40.7%)	45 (36.9%)	
Do you use methotrexate?						
No	14 (66.7%)	21 (51.2%)	17 (51.5%)	11(40.7%)	63 (51.6%)	3.1 (0.364)
Yes	7(33.3%)	20 (48.8%)	16 (48.5%)	16(59.3%)	59(48.4%)	
Do you use any pain killer other than NSAID?						
No	10 (47.6%)	12 (29.3%)	9(27.3%)	10 (37.0%)	41 (33.6%)	2.9 (0. .403)
Yes	11 (52.4%)	29 (70.7%)	24 (72.7%)	17 (63.0%)	81 (66.4%)	
Do you use any over the counter medication?						
No	20 (95.2%)	36 (87.8%)	23 (69.7%)	20(74.1%)	99(81.1%)	7.6 (0. .054).
Yes	1(4.8%)	5(12.2%)	10 (30.3%)	7(25.9%)	23(18.9%)	
Do you use any biological treatment?						
No	17 (81.0%)	21 (51.2%)	22 (66.7%)	11(40.7%)	71(58.2%)	9.6 (0. .022)
Yes	4(19.0%)	20 (48.8%)	11 (33.3%)	11(59.3%)	51(41.8%)	
Do you use any medication without Doctor prescription?						
No	16 (76.2%)	35 (85.4%)	25 (75.8%)	27 (100.0%)	103 (84.4%)	7.9 (0. .046)
Yes	5(23.8%)	6(14.6%)	8(24.2%)	0(0.0%)	19(15.6%)	
Do you have complication from the medication you use?						
No	14 (66.7%)	23 (56.1%)	24 (72.7%)	17 (63.0%)	78 (63.9%)	2.2 (0.517)
Yes	7 (33.3%)	18 (43.9%)	9 (27.3%)	10 (37.0%)	44 (36.1%)	

Table 2: Distribution of patients with RA according to age groups and symptoms and signs and clinical disorders.

Variable / category	Age groups in years					X2
	16 – No (%)	26 – No (%)	36 – No (%)	46 + No (%)	Total No (%)	(p)
Did you feel stiffness upon waking up in the last month?						
No	8 (38.1%)	11 (26.8%)	9 (27.3%)	8 (29.6%)	36 (29.5%)	.96 (0.810)
Yes	13 (61.9%)	30 (73.2%)	24 (72.7%)	19 (70.4%)	86 (70.5%)	
Fever						
No	15 (71.4%)	35 (85.4%)	27 (81.8%)	21 (77.8%)	98 (80.3%)	1.8 (0.600)
Yes	6 (28.6%)	6 (14.6%)	6 (18.2%)	6 (22.2%)	24 (19.7%)	
Weight gain (more than 5 Kg)						
No	21 (100.0%)	41 (100.0%)	30 (90.9%)	25 (92.6%)	117 (95.9%)	5.4 (0.139)
Yes	0 (0.0%)	0 (0.0%)	3 (9.1%)	2 (7.4%)	5 (4.1%)	
Loss of appetite						
No	7 (33.3%)	29 (70.7%)	23 (69.7%)	25 (92.6%)	84 (68.9%)	19.5 (0.00)
Yes	14 (66.7%)	12 (29.3%)	10 (30.3%)	2 (7.4%)	38 (31.1%)	
Burning in mouth						
No	16 (76.2%)	30 (73.2%)	19 (57.6%)	12 (44.4%)	77 (63.1%)	7.8 (0.050)
Yes	5 (23.8%)	11 (26.8%)	14 (42.4%)	15 (55.6%)	45 (36.9%)	
Sore throat/ difficulty in swallowing						
No	17 (81.0%)	33 (80.5%)	29 (87.9%)	24 (88.9%)	103 (84.4%)	1.3 (0.709)
Yes	4 (19.0%)	8 (19.5%)	4 (12.1%)	3 (11.1%)	19 (15.6%)	
Ulcers/bleeding or infection in mouth						
No	19 (90.5%)	32 (78.0%)	27 (81.8%)	25 (92.6%)	103 (84.4%)	3.3 (0.335)
Yes	2 (9.5%)	9 (22.0%)	6 (18.2%)	2 (7.4%)	19 (15.6%)	
Psoriasis						
No	21 (100.0%)	38 (92.7%)	32 (97.0%)	26 (96.3%)	117 (95.9%)	2.0 (0.555)
Yes	0 (0.0%)	3 (7.3%)	1 (3.0%)	1 (3.7%)	5 (4.1%)	
Ecchymosis, petechial rash						
No	20 (95.2%)	37 (90.2%)	29 (87.9%)	24 (88.9%)	110 (90.2%)	0.845 (0.835)
Yes	1 (4.8%)	4 (9.8%)	4 (12.1%)	3 (11.1%)	12 (9.8%)	
Neck pain						
No	11 (52.4%)	24 (58.5%)	14 (42.4%)	7 (25.9%)	56 (45.9%)	7.4 (0.058)
Yes	10 (47.6%)	17 (41.5%)	19 (57.6%)	20 (74.1%)	66 (54.1%)	
Numbness						
No	12 (57.1%)	22 (53.7%)	16 (48.5%)	15 (55.6%)	56 (53.3%)	.48 (0.921)
Yes	9 (42.9%)	19 (46.3%)	17 (51.5%)	12 (44.4%)	57 (46.7%)	
Swelling in Joints.						
No	8 (38.1%)	15 (36.6%)	12 (36.4%)	17 (63.0%)	52 (42.6%)	5.8 (0.117)
Yes	13 (61.9%)	26 (63.4%)	21 (63.6%)	10 (37.0%)	70 (57.4%)	
Hearing loss/ tinnitus						
No	19 (90.5%)	36 (87.8%)	26 (78.8%)	20 (74.1%)	101 (82.8%)	3.4 (0.333)
Yes	2 (9.5%)	5 (12.2%)	7 (21.2%)	7 (25.9%)	21 (17.2%)	
History of Thyroid disease						
No	20 (95.2%)	38 (92.7%)	30 (90.9%)	22 (81.5%)	110 (90.2%)	3.2 (0.359)
Yes	1 (4.8%)	3 (7.3%)	3 (9.1%)	5 (18.5%)	12 (9.8%)	
Pain/ weakness in muscles						
No	13 (61.9%)	13 (31.7%)	14 (42.4%)	14 (51.9%)	54 (44.3%)	5.9 (0.114)
Yes	8 (38.1%)	28 (68.3%)	19 (57.6%)	13 (48.1%)	68 (55.7%)	
Back pain						
No	14(66.7%)	22(53.7%)	16 (48.5%)	9 (33.3%)	61(50.0%)	5.958 (0.134)
Yes	7 (33.3%)	19(46.3%)	17 (51.5%)	18 (66.7%)	61(50.0%)	

Table 3: Distribution of patients with RA according to age groups and Investigation done

Variable / category	Age groups in years					X2
	16 – No (%)	26 – No (%)	36 – No (%)	46 + No (%)	Total No (%)	(p)
what investigation did you have in the last year						
X RAY						
No	13 (61.9%)	29 (70.7%)	20 (60.6%)	15 (55.6%)	77 (63.1%)	1.787
Yes	8 (38.1%)	12 (29.3%)	13 (39.4%)	12 (44.4%)	45 (36.9%)	(0.618)
CT						
No	18 (85.7%)	32 (78.0%)	24 (72.7%)	18 (66.7%)	92 (75.4%)	2.598
Yes	3 (14.3%)	9 (22.0%)	9 (27.3%)	9 (33.3%)	30 (24.6%)	(0.458)
rheumatoid factor						
No	14 (66.7%)	17 (41.5%)	17 (51.5%)	11 (40.7%)	59 (48.4%)	4.358
Yes	7 (33.3%)	41 (100.0%)	16 (48.5%)	16 (59.3%)	63 (51.6%)	(0.225)
Anti-CCP						
No	10 (47.6%)	19 (46.3%)	12 (36.4%)	4 (14.8%)	45 (36.9%)	0.854
Yes	11 (52.4%)	22 (53.7%)	21 (63.6%)	23 (85.2%)	77 (63.1%)	(0.836)
CBC						
No	10 (47.6%)	19 (46.3%)	12 (36.4%)	4 (14.8%)	45 (36.9%)	8.267
Yes	11 (52.4%)	22 (53.7%)	21 (63.6%)	23 (85.2%)	77 (63.1%)	(0.041)
CPR						
No	17 (81.0%)	29 (70.7%)	22 (66.7%)	15 (55.6%)	83 (68.0%)	3.71 (0.295)
Yes	4 (19.05)	12 (29.3%)	11 (33.3%)	12 (44.4%)	39 (32.0%)	
LFT						
No	11 (52.4%)	16 (39.0%)	12 (36.4%)	6 (22.2%)	45 (39.9%)	4.744
Yes	10 (47.6%)	25 (61.0%)	21 (63.6%)	21 (77.8%)	21 (77.8%)	(0.192)
FRT						
No	11 (52.4%)	15 (36.6%)	12 (36.4%)	5 (18.5%)	43 (35.2%)	6.062
Yes	10 (47.6%)	26 (63.4%)	21 (63.6%)	22 (81.5%)	79 (64.8%)	(0.192)

Table 4: Distribution of patients with RA according to age groups and clinical management

Variable / category	Age groups in years					X2
	16 – No (%)	26 – No (%)	36 – No (%)	46 + No (%)	Total No (%)	(p)
How many times have you visited rheumatoid clinics in the last year?						
1-2 times	14 (66.7%)	20(48%)	15 (45.5%)	11(40.7%)	60(49.2%)	9.7 (0.370)
3-4 times	3(14.3%)	5(12.2%)	11 (33.3%)	8(29.6%)	27(22.1%)	
5-6 times	1(4.8%)	5(12.2%)	2(6.1%)	2(7.4%)	10(8.2%)	
More than 6	3(14.3%)	11 (26.8%)	5(15.2%)	6(22.2%)	25(20.5%)	
Do you use any medication?						
No	9(42.9%)	10 (24.4%)	6(18.2%)	11(40.7%)	28(23.0%)	7.3 (0.062)
Yes	12 (57.1%)	31 (75.6%)	27 (81.8%)	24(88.9%)	94(77.0%)	
Do you use cortisone?						
No	13 (61.9%)	29 (70.7%)	19 (57.6%)	16 (59.3%)	77 (63.1%)	1.6 (0.650)
Yes	8 (38.1%)	12 (29.3%)	14 (42.4%)	11 (40.7%)	45 (36.9%)	
Do you use methotrexate?						
No	14 (66.7%)	21 (51.2%)	17 (51.5%)	11(40.7%)	63 (51.6%)	3.1 (0.364)
Yes	7(33.3%)	20 (48.8%)	16 (48.5%)	16(59.3%)	59(48.4%)	
Do you use any pain killer other than NSAID?						
No	10 (47.6%)	12 (29.3%)	9(27.3%)	10 (37.0%)	41 (33.6%)	2.9 (0. .403)
Yes	11 (52.4%)	29 (70.7%)	24 (72.7%)	17 (63.0%)	81 (66.4%)	
Do you use any over the counter medication?						
No	20 (95.2%)	36 (87.8%)	23 (69.7%)	20(74.1%)	99(81.1%)	7.6 (0. .054).
Yes	1(4.8%)	5(12.2%)	10 (30.3%)	7(25.9%)	23(18.9%)	
Do you use any biological treatment?						
No	17 (81.0%)	21 (51.2%)	22 (66.7%)	11(40.7%)	71(58.2%)	9.6 (0. .022)
Yes	4(19.0%)	20 (48.8%)	11 (33.3%)	11(59.3%)	51(41.8%)	
Do you use any medication without Doctor prescription?						
No	16 (76.2%)	35 (85.4%)	25 (75.8%)	27 (100.0%)	103 (84.4%)	7.9 (0. .046)
Yes	5(23.8%)	6(14.6%)	8(24.2%)	0(0.0%)	19(15.6%)	
Do you have complication from the medication you use?						
No	14 (66.7%)	23 (56.1%)	24 (72.7%)	17 (63.0%)	78 (63.9%)	2.2 (0.517)
Yes	7 (33.3%)	18 (43.9%)	9 (27.3%)	10 (37.0%)	44 (36.1%)	

Discussion

The aim of the present study was to compare RA characteristics in the young and old patients. RA and other autoimmune diseases have a well-known female preponderance. Approximately 78% of patients affected by autoimmune diseases such as multiple sclerosis, scleroderma, systemic lupus erythematosus, Sjogren's syndrome, and RA are women [19]. RA is twice as common in women, with a peak incidence between the ages of 45 and 55 years, and the incidence of RA in women appears to be increasing [19-21]. This is consistent with the findings of the present study as 93% of the respondents were females. Smoking is linked to the development of rheumatoid arthritis, particularly for people who have smoked 20 years or longer. Smokers also have an increased risk of more severe rheumatoid arthritis. In addition, they may be less likely to experience remission. [22] In the present study a very low percentage of patients with RA were smokers (7.4%), compared to other studies [22, 23]. This can be explained by the high percentage of females in our study, and smoking is not prevalent among females in our countries. Diets rich in vegetables, fruits, and fiber are associated with lower BMI, have anti-inflammatory properties and help reduce pain and inflammation in patients with RA [24, 25]. However, in the present study the majority of the patients with RA (63%), particularly those younger than 36 years old, did not consume high fiber based diet. This could be due to the tradition of eating in Saudi Arabia, and the use of fast food by young patients; thus health care providers should put in more effort to educate the patients about proper diet for patients with RA. Family history of rheumatoid arthritis (RA) is one of the strongest known risk factors for developing RA, conferring twofold to fourfold increased risk in first-degree relatives. The heritability of RA seems to be around 40%, and is higher for seropositive than for seronegative RA [26].]. In agreement with that, family history of RA was encountered among 32.8% of the patients, with no significant differences between different age groups. Current management of RA may result in a decrease in disease activity and improvement of overall

function of the patient. Nonetheless, comorbidities such as cardiovascular, kidney, lung and gastrointestinal diseases, infections, malignancies, osteoporosis and depression remain an important issue. These comorbidities are more frequently observed in patients with RA compared to the general population [27]. In the present study, chronic diseases of the lung, cardiovascular system, kidney and skin were very low among patients with PA, with no significant differences between different age groups, except for CVD. On the other hand, autoimmune diseases (13.9%), and inflammatory bowel diseases (19.7%) were of higher magnitude among patients with RA, particularly among those aged 36 to 46 years old for auto immune disorders. This is in agreement with another study [28].
It is considered that a patient suffers elderly onset rheumatoid arthritis (EORA) when the disease began at the age of ≥ 60 years [6, 7]. This form of RA occurred in 10–33% of cases of disease [8]. The prevalence of RA increases with age and is estimated to occur in up to 2.2% of the population >55 years [9]. Contrary to that, in the present study 41.8% had the disease diagnosed before the age of 20 years; and 91% had it diagnosed before the age of 41 years old.

In contrast to the disease beginning in young individuals (young onset rheumatoid arthritis, or YORA), EORA seem to follow a more acute course, in association with systemic phenomena such as fever, fatigue and weight loss, as well as with the involvement of larger joints and higher prevalence of atypical forms of onset as remitting seronegative symmetrical synovitis with pitting edema, and polymyalgia rheumatica-like forms [6]. However, the statement that, with increasing age, the prognosis becomes more severe or even that there are differences in the course of the disease for young and elderly people, as some authors claim [6, 9-11], is a controversial matter, since the literature is not unanimous on this point. [10-12]. A previous study could not detect differences in prognosis for both groups [13]. In the present study musculoskeletal manifestations such as stiffness upon waking up (70.5%), back pain (57%), swelling of the joints (57.4%), numbness (46.7%,), and pain and weakness of the muscles (55.7%) were common, and all of them were similar in all age groups. On the other hand, neck pain (54.1%), was significantly more encountered among those aged 46 and older. Fever was reported by about 20% of the patients and it was similar in all age groups. Loss of appetite was encountered among 31.1% of the patients; it was more prominent among those aged 16 years to 25 years, while, burning in the mouth was found in 36.9% of the patients; and was significantly more common in those 46 years and over ($p < 0.05$). Thyroid deficiency (9.8%), difficulty hearing (17%), and difficulty of swallowing and ulcers of the mouth (15%), and psoriasis (4.1%) were encountered in all age groups with no significant differences in occurrence. The treatment of EORA patients pursues the same goals as those of YORA patients, i.e. to control the clinical manifestations, prevent structural damage, preserve function and autonomy of the individual, and also prevent excess mortality caused by the disease [6]. Methotrexate is usually the first medicine given for rheumatoid arthritis, often with another Disease-modifying anti-rheumatic drugs (DMARD), and a short course of steroids (corticosteroids) to relieve any pain [29]. But some authors have observed that the treatment of elderly patients is carried out differently, with less aggressiveness opposed to that for YORA patients [7, 9]. This finding is justified for the fear of prescribing modifying disease drugs in more vulnerable people, with greater possibility of drug interaction due to multiple co-morbidities to which the elderly individual is usually subject [7, 8]. In the present study 23% of the subjects received no treatment for RA, and 67% used painkillers other than NSAIDs. RA treatment was similar in all age groups, except for biological treatment (42%), which was mainly prescribed for those aged 46 years or older. Methotrexate was prescribed for 48.4%, while corticosteroids were prescribed for 37% of the patients with RA. Although about 61% of the patients with RA were found to have enough information about RA, and no significant differences were found between age groups, their visit to rheumatology clinics was very deficient.

Conclusion

Rheumatoid arthritis did not appear to be an old age disorder; it was common before the age of 20 years. Clinical picture and lines of management differed among different age groups. This evaluation raised questions for future studies and improved care for RA. Extrapolation of these differences, and also lack of access to care, may help health care providers to implement a promotional strategy to address this health care issue.

Limitations

Several limitations to this study must be noted. As our sampling strategy was non-random, the results of this study cannot be considered representative of all Saudi population. Participants were recruited through online Google forms and are therefore likely to be more health connected, proactive in their health behavior, and better informed about health issues. Furthermore, participants use the internet, so results may not reflect the views of those unfamiliar with the internet, and living in very remote regions and living traditional/nomadic lifestyles. The majority of respondents were females, and this might reflect changes mainly in females rather than females and males. The survey provides only a snapshot of clinical responses at a particular point in time, and a longitudinal study is required to provide information on whether the observed impact will last for more extended periods. The self-reported medical history may not adequately represent the health status assessed in an interview; thus, for the outcome to be determined, prospective studies are necessary to provide more accurate data to support the need for focused public rheumatology health strategies. Despite these limitations, our results have generated important information on Saudi views of RA, in an otherwise unexplored area of health care.

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