

Psychopathology, quality of life and life satisfaction in patients with rheumatoid arthritis

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Abstract

Background: Rheumatoid arthritis (RA) is a chronic autoimmune disorder characterized by pain stiffness and swelling in the joints with long standing effects on quality of life and is complicated by the presence of medical and psychiatric comorbidity. The current study was aimed at comparing the psychopathology, quality of life and life satisfaction between patients with RA and healthy controls.

Methodology: There were two groups in the study – a study group with RA patients (n=97) and control group with their first-degree relatives (n=93). A semi-structured proforma collected data related to socio-demographic variables and RA. The groups were assessed using the Mini International Neuropsychiatric Interview, WHO Quality of Life scale brief version and Satisfaction with Life Scale. The scores were statistically analyzed and presented.

Results: The mean age of the sample was 44.94 ± 13.02 years (range 18-82 years) and that of the control group was 23.02 ± 8.41 years (range 18-55 years). The mean duration of illness of the group was 7.2 ± 16.9 years (range 1-40 years). Major depression was the commonest disorder seen in 73.1% (n=73) patients with RA. Generalized anxiety disorder, panic disorder and suicidal feelings were also detected. The RA group had significantly lower QOL scores in the psychological and environmental domains of QOL Life satisfaction scores were also significantly lower in the RA group ($p=0.0001$) when compared to controls.

Conclusion: Patients with RA have significant psychopathology that warrants attention and this affects their quality of life and life satisfaction. Further longitudinal studies in this area to gain clinical and epidemiological Indian data are warranted.

Keywords: Rheumatoid arthritis, Depression, Psychopathology, Quality of life, Life satisfaction.

Introduction

Rheumatoid arthritis (RA) is a chronic autoimmune disorder causing inflammation of the joints and surrounding tissues where patients experience pain, stiffness, swelling, and deterioration of joints and progressive joint destruction, disability, and disfigurement.¹ The disease has a continuous progressive course and may have exacerbations and remissions during its course and patients with the disorder may experience physical pain and disability with a greater risk of experiencing emotional disturbances.² The disorder may also produce significant changes in their quality of life and well-being as they experience more losses in function in every domain of human activity including work, leisure and social interactions along with severe physical limitations and deformities that may ensue.³ The presence of a psychiatric disorder in patients with RA has many negative health consequences with increased risk of mortality and morbidity which in turn also affects their quality of life (QOL).⁴

In one of the earliest studies on psychopathology in patients with RA, it was found that the prevalence of any psychiatric disorder in patients suffering from RA in the preceding 6 months was 24.7% and that of a lifetime psychiatric disorder was 42.2% compared to 17.5% and 33.0% in the general population.⁵ An observational study in 80 patients with RA found that moderate to high anxiety was found in 37.5% of the sample and severe depressive symptoms in 35%.⁶ Researchers have pointed out two sets of contributory factors to depression amongst patients with RA viz. the social context of the individual and the biological disease state of the person's RA.⁷ Studies have shown that the most significant predictors of depression in

RA were high tension and low self-esteem followed by fatigue, pain, physical disability and the perceived impact of RA.⁸ Depression in RA has also been associated disease severity, functional disability, counts of swollen and/or tender joints, duration of RA, frequency of arthritis surgery and C-reactive protein levels.⁹

Patients with RA may also experience reduced quality of life in several domains, such as physical health, level of independence, environment and personal beliefs, compared with the healthy population.¹⁰⁻¹² The aim of current study was to study the psychopathology, quality of life and life satisfaction in patients with rheumatoid arthritis and compare the same with healthy controls.

Methodology

The study was a single center, cross-sectional, case-control study from the rheumatology out-patient department of a tertiary general teaching hospital in Mumbai. The study was carried out over a period of 3 months from January to March 2019. The study population had two groups i.e. the study group which were patients suffering from RA (n=97) and the control groups which were first degree relatives accompanying these patients and not suffering from RA (n=93). Written informed valid consent was obtained from all subjects participating in the study. All subjects of all groups were assessed using a semi-structured proforma that addressed various socio-demographic data and details of rheumatoid arthritis were also noted in the same. Educational qualifications and other medical comorbidities and medication history were also be noted. Basic demographic data and other facts were collected for the control group as well. The inclusion criteria for the study

group included a diagnosis of RA according to 2010 Classification of the American College of Rheumatology/ European League Against Rheumatism (ACR/EULAR) Criteria], patients of either gender, age > 18 years and who expressed willingness to participate in the study. The inclusion criteria for the control group were first degree relatives, one each of these patients above the age of 18years, accompanying the patient and expressing willingness to participate in the study. The exclusion criteria were presence of a pre-existing psychiatric disorder and having taken psychiatric treatment in the past, pregnancy and lactation for female patients and lack of willingness to participate in the study. This exclusion was for both cases and controls.

The following scales were used to assess both the groups –

- 1. Mini International Neuropsychiatric Interview (MINI):** The Mini International Neuropsychiatric Interview (MINI) is a short diagnostic structured interview to explore 17 disorders according to Diagnostic and Statistical Manual (DSM-IVTR) diagnostic criteria. It is fully structured to allow administration by nonspecialized interviewers. In order to keep it short it focuses on the existence of current disorders. For each disorder, one or two screening questions rule out the diagnosis when answered negatively. Probes for severity, disability or medically explained symptoms are not explored symptom-by-symptom.¹³⁻¹⁴
- 2. WHO-Quality of Life Scale (WHO-QOL BREF):** It is an instrument that comprises 26 items, which measure the following broad domains: physical health, psychological health, social relationships, and environment.¹⁵
- 3. Satisfaction with Life Scale (SWLS):** The SWLS is a short 5-item instrument designed to measure global cognitive judgments of satisfaction with one's life. The

scale usually requires only about one minute of a respondent's time.¹⁶

The data obtained was entered into an MS Excel sheet and was statistically analyzed using SPSS Version 20.0 computerized software. Chi square test and Student 't' test were used where appropriate. 2-tailed p value was obtained for all analyses and $p \leq 0.05$ was considered as statistically significant. The study was approved by the Institutional Ethics Committee of the hospital.

Results

The mean age of the sample was 44.94 ± 13.02 years (range 18-82 years) and that of the control group was 23.02 ± 8.41 years (range 18-55 years). The case and control groups were not very well matched due to the fact that most first-degree relatives accompanying the patients with RA were their children or younger relatives (Table 1). The main characteristics of the RA in the study group is in Table 1. The mean duration of illness of the group was 7.2 ± 16.9 years (range 1-40 years). Diabetes was seen in 18 (18.55%) and hypertension was seen in 15 (15.46%). 3 patients had a past history of tuberculosis. The joint symptoms of the RA group are described in Table 1.

When the study and control groups were compared for psychopathology, major depression was the commonest disorder seen in 73.1% (n=73) patients with RA. The other disorders seen were generalized anxiety disorder, panic disorder and suicidal feelings were also noted. The control group had far less psychopathology than the RA group (Table 2). The RA group had significantly lower QOL scores in the psychological ($p=0.0001$), environmental ($p=0.001$) and total score domains ($p=0.01$) compared to the study group while the two groups did not differ on overall QOL scores. The perception of life satisfaction was also significantly lower in the RA group ($p=0.0001$) (Table 3).

Table 1: Socio-demographic data and Disease Variables of the sample

Parameter	RA group (n=97)	Control group (n=93)	Statistics
Age (years)	44.94 ± 13.02	23.0 ± 8.41	$t = 13.73$ (df = 188) $p = 0.0001^*a$
Education (years)	5.66 ± 4.84	11.9 ± 4.55	$t = 9.119$ (df = 188) $p = 0.019^*a$
Gender			
Male	15	42	$X^2 = 19.94$ (df=1) $p = 0.0001^*b$
Female	82	51	
Occupation and Work Status			
Employed	9	22	$X^2 = 104.737$ (df=2) $p = 0.0001^*b$
Unemployed	72	5	
Housewife	12	70	
Marital Status			
Married	94	21	$X^2 = 109.78$ (df=1) $p = 0.0001^*$
Unmarried	3	72	
Phenomenological Data of Rheumatoid Arthritis (n=97)			
All Joints involved Both UL and LL	67 (69.07%)		NA

Either UL or LL alone involved	30 (30.93%)	
Pain	96 (99%)	
Swelling	94 (96.9%)	
Stiffness	65 (67%)	
Redness of Joints	37 (38.1%)	

*significant (p<0.05), ^aUnpaired t test, ^bChi square test

Table 2: Psychopathology in Both Groups

Psychiatric Disorder	RA group (n=97)	Control group (n=93)
	N (%)	
Major Depressive Episode with or without melancholic features	71 (71.3)	15 (15.4)
Generalized Anxiety Disorder	21 (21.6)	7 (7.2)
Suicide Risk- Low or Moderate	35 (36)	10 (10.3)
Panic Disorder	29 (29.8)	4 (4.1)
Agoraphobia	13 (13.4)	---
Social Phobia	5 (5.1)	---
Anorexia Nervosa	4 (4.1)	---
Psychotic Disorders / Mood Disorders with Psychotic Features	6 (6.2)	---

Table 3: Quality of Life and Life Satisfaction Scores in both groups

WHO-QOL Scores	RA group (n=97)	Control group (n=93)	Statistics (For t test, df=188) Unpaired t test
	Mean (SD)		
Physical domain	43.18 (15.17)	70.97 (15.22)	t= -12.600, p=0.767
Psychological domain	50.46 (12.77)	71.10 (8.39)	t = 13.101, p=0.0001*
Social domain	57.68 (16.61)	68.68 (12.26)	t= 4.609, p=0.764
Environmental domain	52.49 (10.95)	70.55 (6.65)	t= -13.671, p=0.001*
Total score	203.04 (48.33)	281.94 (39.73)	t= -12.264 p= 0.014*
Life Satisfaction Score	N(%)		Statistics
Extremely Dissatisfied	3 (3.09)	3 (3.32)	p = 0.0001* (df=6) Fischer's exact test
Dissatisfied	9 (9.27)	6 (6.45)	
Slightly dissatisfied	9 (9.27)	3 (3.32)	
Neutral	2 (2.06)	0	
Slightly Satisfied	43 (44.32)	12 (12.91)	
Satisfied	26 (26.81)	45 (48.39)	
Extremely Satisfied	5 (5.15)	25.81)	

*significant (p < 0.05)

Discussion

In our study the control group was relatives that accompanied the patients with RA. Usually children and younger family members accompany patients with RA who are invariably older and hence difference between two groups were noted.¹⁷ Major depression was the most common psychiatric disorder reported. This is in keeping with studies where depression has been found to have a high prevalence in patients with RA.¹⁸ Anxiety disorders have been seen to be common patients with RA and this was also seen in our sample. The prevalence of depression in our study was 73.1% which was much higher than that reported in previous studies that range from 30-56%.¹⁹⁻²⁰ Suicide risk has been under studied in patients with RA and our study reported suicidal feelings in the RA group. This is an area

that warrants further exploration and research.²¹ Many other factors could have accounted for both the higher depression rates and the suicidal feelings which have not been accounted for by the study. Pain in RA is also a marker for depression and suicidality that has not been explored in our data.²²

Researchers have reported that RA affects all domains of quality of life in patients.²³⁻²⁴ However in our study we found that mainly the psychological and environmental domains of QOL are affected, physical and social domain, slightly but not significantly affected. Increased unemployment noted in the previous studies due to long term RA was also seen in our population which in turn affects QOL.²⁵ Larger number of RA patients tend to be dissatisfied or lesser satisfied with life than they were before having the disease. This was noted in our study as well.²⁶ The long duration of the disease is accompanied by loss of

will, energy and ability to work. The patient loses interest in activities that were previously enjoyed by him/her. The inability to achieve simple joys of life makes their life miserable adding to the dissatisfaction.²⁷

The experimental design and the method of data collection used proved to be helpful in aptly and appropriately classifying and grading the psychiatric comorbidities in a sample population of RA in an Indian setup. The addition of a control group helped to compare the results obtained for the diseased population with that of the general population. Probably a better matched control group would have given even better accuracy to the study. A larger sample size and taking account other factors that affect psychopathology and quality of life would have added more value to the study. Depression has an immunological correlate as seen in many immunological disorders and this aspect was not attended to in the study. In the control group, majority of the participants were housewives and a large proportion were employed, thus some bias may have arisen. Further studies into these domains for patients with RA are needed to establish the clinical and epidemiological factors that play a role in course and prognosis of the disorder.

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Conflict of Interest

None

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