

## ORIGINAL RESEARCH

### Clinical profile of patients with rheumatoid arthritis in a tertiary care hospital

Umaima Peshimam<sup>1</sup>, Anannya Mukherjee<sup>2</sup>

<sup>1</sup>Junior resident, Department of General Medicine, D.Y Patil Hospital, Nerul, Navi Mumbai;

<sup>2</sup>Professor and unit head, D.Y Patil Hospital, Nerul, Navi Mumbai

#### ABSTRACT:

**Background:** Rheumatoid arthritis is a systemic inflammatory disorder with the potential to cause destructive joint disease, significant disability, and increased mortality. Hence the present study was undertaken for assessing the clinical profile of patients presenting with rheumatoid arthritis. **Materials & methods:** 100 consecutive rheumatoid arthritis patients who presented in OPD or admitted in the medical ward of D.Y. Patil Hospital, Nerul, Navi Mumbai fitting the inclusion criteria during the entire duration of study. A detailed history of the patient was taken and through clinical examination was done according to predesigned and pretested proforma. **Results:** Joint involvement in the form of Joint pain was the most common clinical manifestation of RA found to be present in 100 percent of RA patients. Metacarpophalangeal joint was the most common joint involved, found to be present in 94 percent of the RA patients. Juxtaarticular osteopenia and soft tissue swelling were found to be present in 85 and 86 percent of the patients respectively. According to DAS grading, mild cases of RA was found to be present in 23 percent of the patients whereas moderate and severe cases of RA were found to be present in 39 and 38 percent of the patients.

**Conclusion:** There are significant proportions of patients who present with high disease activity.

Received: 8 January, 2020

Accepted: 26 February, 2020

**Corresponding author:** Dr. Umaima Peshimam, Junior resident, Department of General Medicine, D.Y Patil Hospital, Nerul, Navi Mumbai

**This article may be cited as:** Peshimam U, Mukherjee A. Clinical profile of patients with rheumatoid arthritis in a tertiary care hospital. *Int J Res Health Allied Sci* 2020; 6(3):157-159.

#### INTRODUCTION

Rheumatoid arthritis is a systemic inflammatory disorder with the potential to cause destructive joint disease, significant disability, and increased mortality. It is a disease, where multiple joints in the body are affected, mainly joints of hands and feet. This leads to joint swelling, pain, stiffness, and possible loss of function.<sup>1</sup> Early symptoms of RA may appear as vague pain with gradual appearance without classical symptoms of joint swelling or tenderness. Presence of some clinical features such as polyarthritis, symmetric arthritis, presence of hand arthritis, pain upon squeezing the metacarpophalangeal or metatarsophalangeal joints, and morning stiffness greater than thirty minutes can be helpful not only in estimating the future course of arthritis but also in limiting the spectrum of differential diagnosis.<sup>2-4</sup> Identification of all involved joints by precise clinical

examination is essential.<sup>5</sup> Hence; under the light of above mentioned data, the present study was undertaken for assessing the clinical profile of patients presenting with rheumatoid arthritis.

#### MATERIALS & METHODS

This observational study was conducted in Department of General Medicine, D.Y Patil Hospital, Nerul, Navi Mumbai. Approval of Institutional Ethics Committee was taken before start of the study. A written signed informed consent was taken prior to enrolling the subjects in the study. 100 consecutive rheumatoid arthritis patients who presented in OPD or admitted in the medical ward of D.Y. Patil Hospital, Nerul, Navi Mumbai fitting the inclusion criteria during the entire duration of study. A detailed history of the patient was taken and through clinical examination was done according to predesigned and

pretested proforma. All patients were subjected to haematological and biochemical investigations. The descriptive and analytical statistics was done. Results were expressed as mean ± standard deviation and proportions. Chi-square test and unpaired t test were used for assessment of level of significance.

**RESULTS**

A total of 100 patients were analysed. 44 percent of the patients belonged to the age group of 31 to 40 years. 18 percent of the patients belonged to the age group of 51 to 60 years. 17 and 15 percent of the patients belonged to the age group of 41 to 50 years and more than 60 years respectively. Mean age (±SD) of the patients was 42.80 (±13.67) years. Joint pain was the most common clinical manifestation of RA found to be present in 100 percent of the RA patients. Morning stiffness and joint swelling were found to be present in 86 percent and 84 percent of the patient population. Limitation of movements and deformity were found to be present in 76 percent and 74 percent of the RA patients. Fever was found to be present in 28 percent of the patients. Metacarpophalangeal was the most common joint involved, found to be present in 94 percent of the RA patients. Juxtaarticular osteopenia and soft tissue swelling were found to be present in 85 and 86 percent of the patients respectively. Joint space narrowing and joint erosion were found to be present in 74 percent and 33 percent of the patients respectively. Intra-articular loose bodies and joint subluxation were found to be present in 12 percent and 4 percent of the patients respectively. Anaemia was found to be present in 65 percent of the patients. According to DAS grading, mild cases of RA was found to be present in 23 percent of the patients whereas moderate and severe cases of RA were found to be present in 39 and 38 percent of the patients.

**Table 1:** Age-wise distribution of patients

Age group (years)	Number of patients	Percentage of patients
18 to 30	6	6
31 to 40	44	44
41 to 50	17	17
51 to 60	18	18
More than 60	15	15
Total	100	100

**Table 2:** Gender-wise distribution

Gender	Number of patients	Percentage of patients
Male	37	37
Females	63	63
Total	100	100

**Table 3:** Clinical profile of the patients

Clinical profile	Number of patients	Percentage
Fever	28	28
Joint pain	100	100
Joint swelling	84	84
Morning stiffness	86	86
Deformity	74	74
Limitation of movements	76	76

**Table 4:** Radiological changes

Radiological changes	Number of patients	Percentage of patients
Juxtaarticular osteopenia	85	85
Soft tissue swelling	86	86
Joint space narrowing	74	74
Joint erosion	33	33
Intra-articular loose bodies	12	12
Joint subluxation	4	4

**Table 5:** Distribution of patients according to DAS score

DAS grading	Number of patients	Percentage of patients
Remission	0	0
Mild	23	23
Moderate	39	39
Severe	38	38

**DISCUSSION**

A total of 100 patients were analysed. The disease has female preponderance with Joint pain being the most common clinical manifestation of RA found to be present in 100 percent of the RA patients. In a study conducted by Kumar AAVS et al, authors reported that clinically 33% of patients had fever, 100% had joint pains, 94% had joint swelling and morning stiffness was present in 97% of the patients. 64% of the patients had joint deformity and 76% of the patients had limitation of movement.<sup>6</sup> Diggikar et al reported that the commonest clinical features noted in all the patients were joint pain (100%), and morning stiffness (86%) followed by joint swelling (84%), joint deformity (74%).<sup>7</sup> Metacarpophalangeal was the most common joint involved, found to be present in 94 percent of the RA patients. Diggikar PM et al, in their study reported that the commonest joint involved were proximal interphalangeal and metacarpophalangeal joints (96 cases each, 96%). The commonest upper limb deformity was ulnar deviation of digits (40 cases, 40%) followed by swan neck deformity (26 cases, 26%), Z deformity (24 cases, 24%), boutonniere deformity (10 cases, 10%). The lower limb deformities were eversion of subtalar joints (6 cases,

6%), plantar subluxation of metatarsal heads (4 cases, 4%), hallux valgus (4 cases, 4%).<sup>7</sup>

Juxtaarticular osteopenia and soft tissue swelling were found to be present in 85 and 86 percent of the patients respectively. Diggikar PM et al, in their study, reported that the commonest radiological changes were juxta articular osteopenia and soft tissue swelling (74%), followed by joint space narrowing (60 cases, 60%), joint erosions (40 cases, 40%), intra-articular loose bodies (10 cases, 10%), joint subluxation (4 cases, 4%).<sup>7</sup>

According to DAS grading, remission occurred in 6 percent of the patients. Mild cases of RA were found to be present in 21 percent of the patients whereas moderate and severe cases of RA were found to be present in 37 and 36 percent of the patients. Penserga EG et al evaluated the level of similarity between SDAI, CDAI, DAS28-ESR and DAS28-CRP in our study population which will help in the quick assessment of the disease for immediate treatment modalities. The study population consisted of 38 Rheumatoid Arthritis (RA) patients attending the OPD of their hospital. After a detailed medical history and anthropometric evaluation, all the participants were subjected to biochemical analysis like CRP, ESR and their disease activity scores were calculated using DAS calculator. The 38 RA patients were of mean age of  $42.08 \pm 12.92$  years with the disease duration of mean of 36 months (1 month- 20 years). The DAS28-ESR mean score was  $5.56 \pm 0.90$ . The DAS28-CRP mean score was  $4.93 \pm 0.86$ . The CDAI mean score was  $26.45 \pm 8.42$  and that of SDAI was  $28.20 \pm 9.08$ . A positive, statistically significant correlation was noted between the four indices for RA activity. The level of similarity between these indices was good (K variation between 0.699 and 0.910). 42.1% of the patients were classified as 'high' disease activity level, when DAS28-ESR and DAS28-CRP scores were considered together. This proportion was of 42.1%, when comparing DAS28-CRP respectively to CDAI and SDAI, compared to 60.5% when DAS28-ESR and SDAI were considered whereas DAS28-ESR and CDAI classified 65.8% of the patients as 'high' disease activity. Finally, CDAI and SDAI classified the patients upto 60.5% as having a 'high' disease activity level. DAS28-CRP, DAS28-

ESR, CDAI and SDAI correlated well for assessing the disease activity status for the RA patients.<sup>8</sup>

## CONCLUSION

Significant disability secondary to joint involvement associated with Rheumatoid Arthritis remains highly prevalent with significant extra articular manifestations such as anaemia of chronic disease.

There are various disease activity indices to evaluate the RA disability generally used now-a-days by the physicians. DAS is mostly used for evaluation of RA scores. There are significant proportions of patients who present with high disease activity.

## REFERENCES

1. Malaviya A, Kapoor S, Singh R, Kumar A, Pande I. Prevalence of rheumatoid arthritis in adult population. *Rheumatol Int.* 1993; 13:131–134
2. Simonsson M, Bergman S, Jacobsson LT, Petersson IF, Svensson B. The prevalence of rheumatoid arthritis in Sweden. *Scand J Rheumatol.* 1999; 28:340–343.
3. Mijiyawa M. Epidemiology and semiology of rheumatoid arthritis in third world countries. *Revue Du Rhumatisme.* 1995; 62: 121–126
4. Carmona L, Villaverde V, Hernandez-Garcia C, Ballina J, Gabriel R, Laffon A. The prevalence of rheumatoid arthritis in the general population of Spain. *Rheumatology* 41:88–95.
5. Handa R1, Rao UR2, Lewis JF3, Rambhad G4, Shiff S5, Ghia CJ4. Literature review of rheumatoid arthritis in India. *Int J Rheum Dis.* 2016 May;19(5):440-51. doi: 10.1111/1756-185X.12621. Epub 2015 Jul 14.
6. Kumar AVSA, Gupta K, Kartik S, Kumar SA. Clinical profile of rheumatoid arthritis patients reporting to a tertiary care center – data from Southwestern part of India. *International Journal of Contemporary Medical Research* 2019;6(6):F26-F32.
7. Diggikar PM, Gokhale VS, Satpathy PK, Baldania DD, Babu TV, Jain KD. A study on clinical profile of patients presenting with rheumatoid arthritis in a tertiary care hospital of Pune city. *National Journal of Medical Research.* 2016; 6(2): 146- 150.
8. Penserga EG, Natividad TAL, Salido ES. Clinical profile of 266 Filipino patients with rheumatoid arthritis included in the rheumatoid arthritis database and registry (RADAR) of the Philippine General Hospital. *International journal of rheumatic diseases.* 2015; 18(4): 433- 438.