ORIGINAL RESEARCH

Analysis of clinical profile of patients with Rheumatoid Arthritis: An observational study

Dr. Amit Sachan

Assistant Professor, Department of General Medicine, Rajshree Medical Research Institute, Bareilly, Uttar Pradesh, India

Corresponding Author
Dr. Amit Sachan
Assistant Professor, Department of General Medicine, Rajshree Medical Research Institute, Bareilly, Uttar Pradesh, India

Received: 11 January, 2022 Acceptance: 13 February, 2022

ABSTRACT
Background: The present study was undertaken for assessing the clinical profile of patients with rheumatoid arthritis (RA). **Materials & materials:**In all, 100 RA patients were included in this investigation. All of the patients' complete demographic information was acquired. Every patient's whole clinical and medical history was evaluated using a self-constructed questionnaire. Every patient underwent a clinical examination, and a clinical profile was kept. A comprehensive haematological profile was acquired along with blood samples. **Results:**Joint pain was the most common clinical manifestation of RA found to be present in 60 percent of the RA patients. Morning stiffness and joint swelling were found to be present in 90 percent and 75 percent of the patient population. Limitation of movements and deformity were found to be present in 80 percent and 50 percent of the RA patients. Fever was found to be present in 30 percent of the patients. **Conclusion:**Thorough knowledge of clinicians and physicians about the clinical profile of the RA can lead to early detection and early treatment planning thereby improving the prognosis of the disease.
Key words: Clinical profile, Rheumatoid arthritis

INTRODUCTION

Rheumatoid arthritis (RA) is an inflammatory rheumatic disease with progressive course affecting articular and extra-articular structures resulting in pain, disability and mortality. Persistent inflammation leads to erosive joint damage and functional impairment in the vast majority of patients. The onset of disease is not similar in all patients but varies in regard to type, number, and the pattern of joint involvement. The course of disease may be also different according to the presence or absence of several variables including genetic background, frequency of swollen joints, autoantibody in the serum and the severity of inflammatory process.[1- 3]For decades, the possible pathogenic effects of one or more disease-associated chromosomal regions (loci) have been investigated separately. These studies often led to controversies as some groups were able to confirm linkage of a certain single nucleotide polymorphism (SNP) to RA, while others could not. Recent genome-wide association studies (GWAS) and especially large-scale cohorts, such as the Wellcome Trust Case Control Consortium (WTCCC) database, have enabled the simultaneous assessment of thousands of genes, leading to more consequent results of genetic associations.[4- 6]Hence; the present study was undertaken for assessing the clinical profile of patients with rheumatoid arthritis.

MATERIALS & METHODS

The present study was conducted in the department of medicine of the medical institute and it included assessment of clinical profile of patients with rheumatoid arthritis. Ethical approval was obtained from institutional ethical committee and written consent was obtained after explaining in detail the entire research protocol. In all, 100 RA patients were included in this investigation. All of the patients' complete demographic information was acquired. Every patient's whole clinical and medical history was evaluated using a self-constructed questionnaire. Every patient underwent a clinical examination, and a clinical profile was kept. A comprehensive haematological profile was acquired along with blood samples. All the results were recorded in Microsoft excel sheet and all were analysed by SPSS software.

Univariate analysis was done for evaluation of level of significance.

RESULTS

A total of 100 patients were analysed. 23 percent of the patients belonged to the age group of 18 to 40 years. Mean age of the patients was 51.3 years. 25 percent of the patients were males while the remaining were females. Joint pain was the most common clinical manifestation of RA found to be present in 60 percent of the RA patients. Morning stiffness and joint swelling were found to be present in 90 percent and 75 percent of the patient population. Limitation of movements and deformity were found to be present in 80 percent and 50 percent of the RA patients. Fever was found to be present in 30 percent of the patients.

Table 1: Age-wise distribution of patients

Age group (years)	Number of patients	Percentage of patients
18 to 40	23	23
41 to 60	41	41
More than 60	36	36
Total	100	100
Mean age	51.3 years	

Table 2: Gender-wise distribution

Gender	Number of patients	Percentage of patients
Male	25	25
Females	75	75
Total	100	100

Table 3: Clinical profile of the patients

Clinical profile	Number of patients	Percentage
Fever	30	30
Joint pain	60	60
Joint swelling	75	75
Morning stiffness	90	90
Deformity	50	50
Limitation of movements	80	80

DISCUSSION

Rheumatoid arthritis (RA) is a chronic inflammatory disease of unknown etiology and complex multifactorial pathogenesis affecting joints and other tissues. The natural history of RA is poorly defined, its clinical course is fluctuating and the prognosis unpredictable. RA affects up to 1–3% of the population, with a 3:1 female preponderance disappearing in older age. There is evidence of a genetic predisposition to the disease. RA is characterized by progressive and irreversible damage of the synovial-lined joints causing loss of joint space, of bone and of function, as well as deformity. Extracellular matrix degradation is a hallmark of RA which is responsible for the typical destruction of cartilage, ligaments, tendons, and bone.[7- 9]Hence; the present study was undertaken for assessing the clinical profile of patients with rheumatoid arthritis.

Neopane A et al identified the various causes of polyarthritis in our clinical practice, discuss the varied clinical presentation of rheumatoid arthritis including early Rheumatoid arthritis and to evaluate the treatment response during one year follow up. Rheumatoid arthritis was the commonest cause of polyarthritis (77.8%) with a period prevalence of 0.7%. Early presentation included atypical features like asymmetry, unilateral presentation, manifesting within 2 months to 2 years of diagnosis. 43% (n=18) of the patients had swelling and tenderness in overused joints 1.5 years prior to full clinical manifestation. Flitting or migratory joint pain not considered to be a feature of rheumatoid arthritis was also present in 14.3% (n=6) patients with mean duration of 1.5 years prior to full blown presentation. MCPJ (metacarpophalyngeal joints) and PIP (proximal interphalyngeal joints) were involved in 90%. Treatment response with Methotrexate as a single DMARD was good as compared with DAS 28 ESR score.[11]

Kosrirukvongs P et al evaluated the prevalence of secondary Sjogren's syndrome in patients with rheumatoid arthritis, including clinical characteristics and dry eye, compared with non-Sjogren's syndrome. Sixty-one patients with rheumatoid arthritis were recruited at Siriraj Hospital during March 2009-September 2010 and filled in the questionnaires about dry eye for Ocular Surface Disease Index (OSDI) with a history taking of associated diseases, medications, duration of symptoms of dry eyes and dry mouth. The Schirmer I test without anesthesia, tear break-up time, rose bengal staining score, severity of keratitis and salivary scintigraphy were measured and analyzed.

Prevalence of secondary Sjogren's syndrome and dry eye were 22.2% (95% CI 15.4 to 30.9) and 46.7% (95% CI 38.0 to 55.6), respectively. Dry eye interpreted from OSDI, Schirmer 1 test, tear break-up time and rose bengalstaining was 16.4%, 46.7%, 82% and 3.3% respectively. Fifty-two percent of patients had a history of dry eye and dry mouth with mean duration 27.4 and 29.8 months, respectively. Superficial punctate keratitis and abnormal salivary scintigraphy were found in 58.2% and 77.8%. Duration of rheumatoid arthritis, erythrocyte sedimentation rate were not correlated with secondary Sjogren's syndrome. Dry eye from OSDI with secondary Sjogren's syndrome (33.3%) compared with non-Sjogren's syndrome (9.5%) was significant difference ($p = 0.008$). Adjusted odds ratio for secondary Sjogren's syndrome in OSDIL score > 25 was 13.8 (95% CI 2.6 to 73.8, $p = 0.002$) compared to OSDI score < 25. Awareness and detection of dry eye syndrome and secondary Sjogren's syndrome in rheumatoid arthritis was crucial for evaluation of their severity and proper management.[12]Al-Bishri J et al estimated the percentage of comorbid illness among rheumatoid arthritis patients and explored the relationship between this comorbidity and different prescriptions. The association between comorbidity and different drugs was analyzed. A total of 340 patients were included. The most comorbidities were hypertension 122 (35.9%), diabetes 105 (30.9%), osteoporosis 88 (25.8%), and dyslipidemia in 66 (19.4). The most common drug prescribed was prednisolone in 275 (80.8%) patients followed by methotrexate in 253 (74.4%) and biological therapy in 142 (41.5%) patients. Glucocorticoids were prescribed considerably more frequently in hypertensive and diabetic patients as well as in patients with osteoporosis and dyslipidemia. Most patients with rheumatoid arthritis suffered from comorbid diseases.[13]

CONCLUSION

Thorough knowledge of clinicians and physicians about the clinical profile of the RA can lead to early detection and early treatment planning thereby improving the prognosis of the disease.

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. Joshi VR. Arthritis in elderly. J Indian Med Assoc. 2003; 101:408–410
3. Mijiyawa M. Epidemiology and seminology of rheumatoid arthritis in third world countries. Revue Du Rhumatisme. 1995; 62: 121–126
4. Guo Q, Wang Y, Xu D, Nossent J, Pavlos NJ, Xu J. Rheumatoid arthritis: pathological mechanisms and modern pharmacologic therapies. Bone Res. 2018;6:15. Published 2018 Apr 27. doi:10.1038/s41413-018-0016-9
5. Heidari B. Rheumatoid Arthritis: Early diagnosis and treatment outcomes. Caspian J Intern Med. 2011;2(1):161–170.
6. Ropes MW, Bennett GA, Cobb S, Jacox R, Jessar RA: Proposed diagnostic criteria for rheumatoid arthritis. Bull Rheum Dis 7:121-124, 1956
7. Cobb S, Merchant WR, Warren JE: An epidemiologic look at the problem of classification in the field of arthritis. J Chronic Dis 250-54, 1955
8. Bennett PH, Wood PHN (editors): Population Studies of the Rheumatic Diseases. Amsterdam, Excerpta Medica, 1968, pp 417-478
9. Mitchell DM, Fries JF: An analysis of the American Rheumatism Association criteria for rheumatoid arthritis. Arthritis Rheum 25:481-487, 1982
10. Arnett FC1, Edworthy SM, Bloch DA, McShane DJ, Fries JF, Cooper NS et al. The American Rheumatism Association 1987 revised criteria for the classification of rheumatoid arthritis. Arthritis Rheum. 1988 Mar;31(3):315-24.
11. Neopane A, Sharma M, Rayamajhi S. Prospective evaluation of clinical profile and treatment outcome of patients presenting with polyarthritis diagnosed as rheumatoid arthritis. Medical Journal of Shree Birendra Hospital. 2012; 10(2): 22-28.
12. Kosrirukvongs P1, Ngowyutagon P, Pusuwan P, Koolvisoot A, Nilganuwong S. Prevalence of dry eye syndrome and Sjogren's syndrome in patients with rheumatoid arthritis. J Med Assoc Thai. 2012 Apr;95 Suppl 4:S61-9.
13. Al-Bishri J, Attar S, Bassuni N, et al. Comorbidity profile among patients with rheumatoid arthritis and the impact on prescriptions trend. Clin Med Insights Arthritis MusculoskeletDisord. 2013;6:11–18. Published 2013 Apr 4. doi:10.4137/CMAMD.S11481