

RHEUMATOID ARTHRITIS AND ITS CLINICAL PROFILE AMONG PATIENTS OF A TERTIARY CARE CENTER

General Medicine

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ABSTRACT

Background: Rheumatoid arthritis is an autoimmune and inflammatory disease, which means that your immune system attacks healthy cells in your body by mistake, causing inflammation (painful swelling) in the affected parts of the body. **Aim& Objectives:** To study clinical spectrum and various joint involvements in rheumatoid arthritis. **Material and Methods:** A hospital-based, analytical cross-sectional study was conducted in the Department of General Medicine, Kamineni Institute of Medical Sciences, Telangana. Patients older than 15 years of age with fulfilment of Modified American College of rheumatology criteria were included. Study period was 6 months. IEC approval and written consent were obtained. A detailed history was taken and examination done. Data was analyzed in SPSS version-22 trial. **Results:** About 96 p.c (48) of the patients had articular manifestations of hand and 28 p.c (14) of the patients had anemia as extra articular manifestation. **Conclusion:** Frequency of complications correlates with duration of the disease.

KEYWORDS

Articular, Extra articular, Rheumatoid arthritis, Rheumatic factor.

INTRODUCTION

Rheumatoid arthritis (RA) is an autoimmune and inflammatory disease.¹ This chronic systemic disease that affects the joints, muscles, connective tissues, tendons and fibrous tissues often causing pain and deformity.² It tends to occur during the productive years of adulthood between the ages of 20 and 40 years.² Prevalence varies between 0.3 to 1 p.c and is more common in women and in developed countries.² Disease is characterized by a persistent inflammation of joints along with cartilage and bone damage with significant limitation of activity, reduction in the quality of life and systemic complications.³ The highest risk of concordance of RA is noted in Twins who have two HLA-DRB1 alleles known to be associated with RA.⁴ Oral contraceptives usage had shown a decrease in severity of the disease.⁵ Pregnancy is associated with remission of the disease in the last trimester.⁶

Rheumatoid Factor (RF) is an autoantibody reactive with the Fc portion of IgG, which is observed in more than 2/3rd of adults with the disease and precedes the onset of RA by many years.⁷ Patients may present with fatigue, malaise, musculoskeletal pains, generalized weakness, fever, loss of appetite, weight loss and articular manifestations. The most commonly involved joints include metacarpophalangeal joint (MCP), proximal interphalangeal joint (PIP), metatarsophalangeal joint (MTP) and wrists. Large joints like elbow, hip, knee, and ankle become symptomatic after the small joints. Cervical joint involvement and temporomandibular joint involvement may also occur. Atlantoaxial joint is prone to subluxation.⁸

RA have mild normocytic normochromic anemia that correlated with ESR elevation and activity of the disease.⁹ Extra articular manifestations of RA may be associated with excess mortality.⁹ About three quarters of RA patients have anaemia of chronic disease whereas only one quarter respond to iron therapy.¹⁰

AIM & OBJECTIVES

1. To determine the spectrum of rheumatoid arthritis.
2. To study various joint involvements in rheumatoid arthritis.

MATERIAL AND METHODS

A hospital-based, analytical cross-sectional study was conducted in the Department of General Medicine, Kamineni Institute of Medical Sciences, Narketpally, Nalgonda (Dist), Telangana. Patients older than 15 years of age with fulfilment of four of the seven criteria based on the Modified American College of rheumatology were included. Patients with monoarticular involvement were excluded. The study was conducted for a period of 6 months from 1st September 2018 to 28th February 2019. IEC approval and written consent were obtained in prior. A detailed history was taken and examination done. These patients were subjected to haematological, acute phase reactants (ESR, C-reactive protein), urine analysis (sugar, protein & deposits),

immunological (rheumatoid factor and anti-nuclear antibody), metabolic (RFT & LFT), radiological (X-ray of involved parts), ECG, USG and HRCT lung investigations. The data obtained was entered in Microsoft Excel and analyzed in SPSS version-22 trial. Appropriate statistical tests were used.

RESULTS

About 50 patients [9 (18%) male & 41 (82%) female] were included in the present study. Mean age of the patients was 41.3 years. Table-1 reports the prevalence of rheumatic factor among males 8 p.c (4) and females 56 p.c (28) respectively. Figure-1 reports various common symptoms in rheumatoid arthritis which include fever [14 p.c (7) males & 76 p.c (38) females], weight loss [4 p.c (2) males & 38 p.c (19) females] and fatigue [10 p.c (5) males & 42 p.c (21) females] respectively. Table-2 reports various articular and extra articular manifestations, about 96 p.c (48) of the patients had articular manifestations of hand [Proximal Inter Phalangeal (PIP) Joints & Metacarpophalangeal (MCP) joints] and 28 p.c (14) of the patients had anemia as extra articular manifestation.

Table-1:- PREVALENCE OF RHEUMATIC FACTOR BASED ON GENDER

GENDER	RHEUMATIC FACTOR		TOTAL
	POSITIVE	NEGATIVE	
MALE	4 (8%)	5 (10%)	9 (18%)
FEMALE	28 (56%)	13 (26%)	41 (82%)
TOTAL	32 (64%)	18 (36%)	50 (100%)

Figure-1:- CONSTITUTIONAL SYMPTOMS IN RHEUMATOID ARTHRITIS

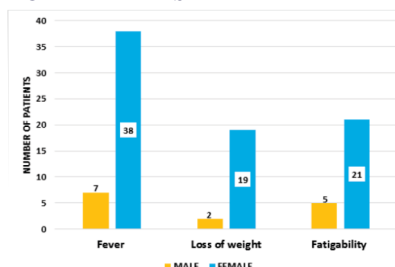


Table-2:- ARTICULAR & EXTRA ARTICULAR MANIFESTATIONS

ARTICULAR MANIFESTATIONS		
	Number of patients	Percentage
Cervical Joint	2	4%
Elbow	24	48%

Wrist	41	82%
Hands (PIP&MCP)	48	96%
Hip	4	8%
Knee	3	6%
Ankle	26	52%
Foot (MTP&PIP)	19	38%
EXTRA ARTICULAR MANIFESTATIONS		
Anaemia	14	28%
Rheumatoid Nodules	3	6%
Eye Involvement	2	4%
Involvement Serosa	1	2%
Lung	2	4%
Cardiac Involvement	1	2%
Vasculitis	1	2%
Secondary Sjogren's	2	4%
Neural	2	4%

DISCUSSION

In the present study 50 patients were involved on fulfilment of Modified American College of Rheumatology criteria. In about 96 p.c of the patients' articular manifestations of hand [Proximal Inter Phalangeal (PIP) Joints & Metacarpophalangeal (MCP) joints] were observed. In a study conducted by Chandrasekaran et al¹¹ in South India, the involvement of PIP was 85 p.c & MCP was 68 p.c respectively.

Cervical joints were involved in about two patients and among them one patient had it in the form of atlanto axial subluxation. In a study conducted by D Chellapandian et al¹², it was reported that about 42 p.c of the patients had an involvement of cervical spine and 20 p.c had atlanto axial subluxation. About 28 p.c of the patients had anemia as extra articular manifestation. In various other studies the manifestation of anemia was in the range of 25-35 p.c which was similar to the present study.^{9, 10, 11}

CONCLUSION

Majority of the patients had an involvement of PIP & MCP and wrist joints. Extra articular manifestations (56 p.c) were equally important in Rheumatoid arthritis. The frequency of complications correlates with duration of the disease.

CONFLICT OF INTEREST: None to declare

SOURCE OF FUNDING: Nil

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