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Dr. Pradeep Kumar Shenoy C
Assistant Professor, Department
of Internal Medicine, KMC,
Mangalore, Karnataka, India

A study of disease activity in untreated patients of rheumatoid arthritis

Dr. Pradeep Kumar Shenoy C

Abstract

Rheumatoid arthritis is a prevalent form of chronic inflammatory illness that can lead to joint pain, disability, and even joint destruction. The evaluation of the level of disease activity is a crucial stage in the most effective care of these individuals.

Keywords: Disease, activity, untreated, rheumatoid, arthritis

Introduction

The most prevalent form of chronic inflammatory arthritis found all over the world is rheumatoid arthritis. It is a progressive chronic inflammatory multisystem disease with an unknown aetiology that causes joint damage and disability [1]. It is characterised by symmetric polyarthritis, which is a type of joint inflammation. The third, fourth, and even sometimes the fifth decades of life are typically when symptoms first appear. It is a chronic inflammatory disease that worsens over time and causes damage and disability, both of which may be avoided if treatment is started as soon as possible and is effective. The most dreaded complications of rheumatoid arthritis are joint destruction and deformities, both of which can be caused by damage to the articular and periarticular structures of the affected joint. People with rheumatoid arthritis who have had the disease for a long time and are aggressively affected by it are more likely to develop deformities in their hands and feet [1]. Deformities of the wrist and hands can include the swan-neck deformity, the boutonniere deformity, the zeta deformity, the ulnar drift, the piano-key deformity, and the bent-fork deformity. Deformity known as hallux valgus is frequently seen in the foot. Patients who are treated early with disease-modifying drugs have been shown to have a significantly greater improvement in pain and disability than those who are treated later [1]. Early intervention has been shown to change the natural course of the disease. In addition, regular clinical assessments must be performed in order to guarantee that the treatment is successful. As a result, the assessment of the disease's activity is a significant component in the management of the disease, given that treatment protocols are contingent on the disease's activity [2]. The authors of this study attempted to determine the degree to which the disease was severe.

Materials and Methods

A descriptive study using a cross-sectional design was carried out on fifty patients who were chosen in consecutive order between September 2013 and August 2014 for the research. The research was conducted on fifty adults who had a diagnosis of definite rheumatoid arthritis and had never had any treatment for their condition. These patients attended the Medicine Outpatient Department (OPD) of a tertiary care hospital in India.

All patients who had been diagnosed with confirmed rheumatoid arthritis in accordance with the American College of Rheumatology and the European League against Rheumatism (ACR/EULAR) 2010 classification criteria for rheumatoid arthritis were eligible for participation in the study. Patients who were already on any type of disease-modifying antirheumatic drug (DMARD) or steroid were not allowed to participate in the trial since DMARDs would make it difficult to determine the severity of newly diagnosed cases. Patients who had other systemic diseases such as uncontrolled diabetes, hypertension, and any clinically significant neurologic, psychiatric, respiratory, cardiac, or gastroenterological

Correspondence

Dr. Pradeep Kumar Shenoy C
Assistant Professor, Department
of Internal Medicine, KMC,
Mangalore, Karnataka, India

diseases were not allowed to participate in the study. This is because these diseases would interfere with one of the parameters of DAS28, which is the patient's global health assessment [3, 4]. Patients who did not have any other systemic diseases were allowed to participate in the study. The patients were subdivided into HDA, MDA and LDA on the basis of the following cut-offs of DAS28-ESR score [5, 6, 7]: LDA \leq 3.2, 3.25.1 The patients underwent a clinical examination in which they were scored on the number of swollen joints they had as

well as the number of tender joints they had (SJC-28). The bilateral proximal interphalangeal joints (ten joints), the metacarpophalangeal joints (ten joints), the wrist joints (two joints), the elbow joints (two joints), the shoulder joints (two joints), and the knee joints (two joints) were the 28 joints that were assessed for each patient. All of the patients had their ESRs tested in millimetres per hour.

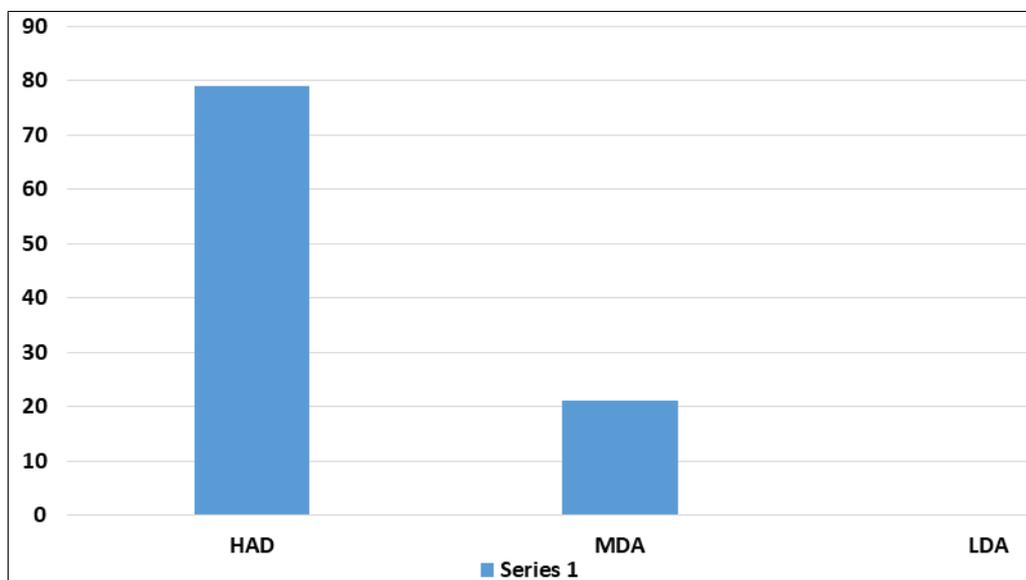
Results

Table 1: TJC: Tender joint count; SJC: Swollen joint count; ESR: Erythrocyte sedimentation rate in mm/ hour; GH: Patient's global health assessment in mm; DAS28: Disease activity score 28 joints

	Age (years)	TJC	SJC	ESR (mm)	GH	DAS28- ESR
Mean	37.12	13.4	5.12	59.39	64.98	6.2
Standard deviation	11.10	6.22	4.48	32.28	22.23	1.2
Standard error of mean	1.111	0.67	0.47	3.6	2.27	0.11
Lowest value	17	1.8	0.2	14	20	3.11
Highest value	68	28	16	129	101	8.32
Median	36.5	11	4	52	69	641

➤ The majority of the patients were found to be in the HDA group and no patient was in LDA group. The patients

were then treated as per the standard guidelines



Graph 1: HAD, MDA and LDA group

Discussion

This was a cross-sectional study on DMARD naïve rheumatoid's Arthritis patients attending Medicine OPD. The DAS has been validated as a tool for the assessment of disease activity in rheumatoid arthritis patients. In everyday clinical work, the determination of DAS was an extremely laborious and time-consuming operation. The DAS was then subjected to a series of mathematical adjustments, which culminated in the creation of the DAS-28, which involved the assessment of all 28 joints in the body. In 1993, the DAS28-ESR was created as a standard approach for assessing the disease activity of individuals who were suffering from rheumatoid arthritis. This method was acknowledged at the time. The counting of sensitive joints and swollen joints out of a total of 28 clinical joints is a part of this procedure [3, 4, 6, 7]. Both the patient's subjective evaluation of his or her health status on a visual analogue scale (VAS) and the laboratory value of ESR are necessary components of this diagnostic instrument. This instrument has shown to be reliable enough over the years to earn its status as the gold standard measurement for determining disease activity. There have been other

modifications made to this instrument, such as the DAS28-CRP, the Simplified Disease Activity Index (SDAI), and the Clinical Disease Activity Index (CDAI), which may be found in [8, 10]. These adjustments have gradually resulted in the substitution of ESR with CRP, such as in DAS28-CRP or SDAI, as well as the replacement of the laboratory parameter with a thorough clinical assessment, such as in CDAI [11, 13].

Conclusion

The measurement of disease activity is essential in order to treat patients with rheumatoid arthritis in accordance with the current treatment guidelines, which are based on the disease activity score (DAS).

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