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General Medicine

STUDY OF DISTRIBUTION OF PATIENTS WITH RHEUMATOID ARTHRITIS ON THE BASIS OF VISUAL ANALOGUE SCALE (VAS) SCORE IN A TERTIARY CARE HOSPITAL : A PROSPECTIVE OBSERVATIONAL CROSS SECTIONAL STUDY

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ABSTRACT **Background :**Rheumatoid arthritis is a systemic disease characterised by inflammation the principal hallmark of which is symmetric polyarthritis with main involvement of the small joints in hands and feet.In this prospective study a total of 110 patients were taken and VAS score in all patients was calculated according to the questionnaire and patients were distributed in various grades of severity accordingly. **Materials and methods:** In this prospective study conducted over one year a total of 110 patients who were diagnosed cases of rheumatoid arthritis were observed and standard questionnaires were used to find out the VAS score . Inclusion of patients was done of those patients who fulfilled ACR/EULAR criteria for diagnosing rheumatoid arthritis. **Results:** In this prospective study of 110 patients it was found that using VAS score most of the patients described their pain as severe and very severe comprising 50% (n=55) and 37.3% (n=41) respectively

KEYWORDS : RA, VAS, SEVERITY.

INTRODUCTION

Rheumatic diseases have a major impact on both the individuals with the disease and the society in terms of economic, social, and psychological burden. Most rheumatic diseases are associated with high levels of pain and reduced physical function. Compared with other major disease groups, rheumatic diseases are the most common cause of chronic health problems and pain, the leading cause of long-term disability, and accountable for a considerable part of the total health care costs in western countries. Rheumatoid arthritis, one of the very important rheumatic disorders, has been shown to have alarming increase in its prevalence in worldwide studies and is known to cause physical, social and economic burden **Malviya *et al*, 1994 (1); Chopra *et al*, 2001(2); Mahajan *et al*, 2003(3).** Pain is the most prominent symptom in the majority of people with arthritis , a common reason for primary care consultation (6-8), and a major source of health care costs . Musculoskeletal pain appears to be much more common now than 40 years ago . Nonetheless, quantitative information concerning pain, which is required to assess and document possible improvement, stabilization, or worsening of pain over time, is generally not recorded in routine medical care. In a survey of U.S. emergency department visits in 1999, 52% included no recorded information concerning the presenting level of pain **MCLEAN et al 2002 (4) .** Pain is the major reason for patients with RAto seek medical care , although these patients experience many other symptoms such as joint swelling, tenderness, deformities, and morning stiffness. Furthermore, pain is the area of health in which most of patients with RA would like to see improvement . **Fries et al (5)** showed that DMARDs are the best drugs in the long-term for relieving pain in RA. More frequent visits to rheumatologists were associated with greater improvements in pain and functional capacity over one year . Several recent clinical trials of DMARDs showed statistically significant improvement in pain over 6 to 24 months in treatment groups compared to groups that received control medications or placebo . **Crotty *et al*, 1994 (6)** have reported that the degree of pain and depression in RA cases is a preceding sign of physical disability that may appear later, and consequently, the psychiatric signs can be as much predictive as the biological (CRP, ESR, etc.) and physical parameters in the prognosis of the disease. It has been noted that depression increases disease activity in RA cases and treatment of accompanying psychiatric disorders reduces disease activity.

METHODS AND MATERIALS :

The present prospective observational and cross-sectional one point analysis study entitled **Study of distribution of patients with rheumatoid arthritis on the basis of Visual Analogue Scale (VAS) score in a tertiary care hospital : A prospective observational cross sectional study** was done on patients attending Medicine OPD in Govt. Medical College, Jammu. Diagnosis of rheumatoid arthritis was done on basis of 2010-ACR-EULAR classification criteria for RA.

In case of any diagnostic dilemma patients were suggested for:
1) Rheumatoid factor by nephlometry.
2) Anti CCP antibodies.
3) ESR/CRP.

EXCLUSION CRITERIA

- Patients who needed hospital admission or those with any other forms of lower limb immobility or abnormality such as paraplegia.
- Critically ill patients, pregnant women, lactating women.

Detailed history about Rheumatoid Arthritis was taken. All the data obtained from the patients of the study group was noted down on a Proforma especially designed for this purpose. Data was entered in Microsoft Excel & analyzed using SPSS software version 20. Data was reported as Mean ± SD for quantitative variable and as n (%) for qualitative variable.

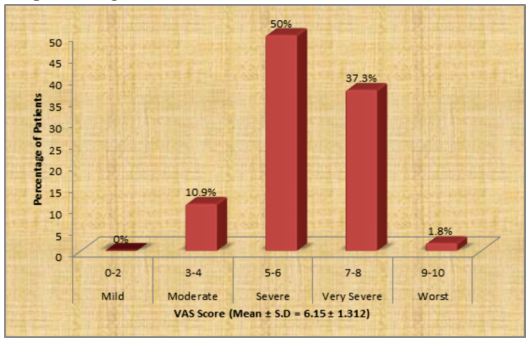
RESULTS : :

Distribution of patients on the basis of Severity of VAS Score (n=110)

Severity	VAS Score	No. of Patients	Percentage
Mild	0-2	0	0
Moderate	3-4	12	10.9
Severe	5-6	55	50
Very Severe	7-8	41	37.3
Worst	9-10	2	1.8

Mean ± SD = 6.15 ± 1.312

Using VAS score, most of the patients described their pain as severe and very severe comprising 50% (n=55) and 37.3% (n=41) respectively, while moderate and worst pain was described by 10.9% (n=12) and 1.8% (n=2) respectively. None of the patients complained of mild pain using VAS score.



Distribution of Patients on the Basis of Severity of VAS Score (n=110)

DISCUSSION :

A visual analog pain scale was initially used in psychology by Freyd and others since the early 1900s. Huskisson and colleagues developed

the use of a pain VAS in rheumatology through a series of investigations in the late 1970s , pointing out that "only the patient can measure pain severity" . These investigators described a variety of visual analog scales, including vertical and horizontal scales, and scales with equally spaced lines with the indications of mild, moderate and severe pain. They concluded that numbers should not be included SCOTT J et al 1976 (7). Regarding clinical variables like DAS Score & VAS Score which reflect the severity of disease, it was found in our study group that majority of patients were having moderate to very severe DAS & VAS Scores, which is In concordance with the previous studies Suurmeijer et al, 20019(8); Alishiri et al, 2011(9)

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Kvien et al, 1998(10), used a VAS pain score in a survey of 1552 subjects on a community register of all hospital diagnosed cases of RA. The mean VAS in the 1030 respondents (who had a mean disease duration of 13 years) was 4.6 cm. Similarly in study done by Wiles et al, 2001(11), 50% of hospital attenders with RA had a VAS pain score of 5 cm or more and 50% of all the other groups had a VAS pain score of 4 cm or more. The results of these studies correspond to the VAS score of patients in our study in which 50 percent of the patients are having VAS score of 5 to 6 and mean VAS score was found to be 6.15.

CONCLUSIONS :

Using VAS score severe (50%) to very severe (37.3%) pain was seen in most of the patients. Thus results of the current study further impress upon comprehensive and aggressive management plan involving clinicians as well as persons from allied specialties for early diagnosis of Rheumatoid Arthritis as early as window period, so as to institute treatment and improve QOL of patients in all spheres.

Further for improving quality of life all health workers must specially pay attention to all the dimensions of QOL as well as Paradigms of quality of life predictors. Clinicians should therefore evaluate psychosocial factors, as well as subjective disease status, to improve the QOL of patients with RA.

Conflicts of interest : NONE

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