

Relation Between SF-36, mHAQ Scores and Disease Activity in Rheumatoid Arthritis

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Abstract

Objective: To investigate the relationship between quality of life (QOL) and disease activity in patients with rheumatoid arthritis (RA).

Methods: 200 patients with RA were included in the study. Data were obtained by questionnaires and laboratory investigation. Disease Activity Score (DAS-28) was calculated for assessment of disease activity. Separate dimensions and physical and mental summary scores of the Short form Health survey (SF-36) and *Health Assessment Questionnaire* (HAQ) were compared to study the relationship between QOL and disease activity in patients with rheumatoid arthritis.

Results: There was a significant association between DAS-28 and QOL scores.

Conclusions: RA has a significant effect on the health related quality of life of patients, and its activity is directly related to worse QOL.

Keywords: Rheumatoid arthritis, Quality of life, DAS-28, SF-36.

Introduction

Rheumatoid arthritis (RA) is a chronic, multi-systemic autoimmune and inflammatory disease, which can result in significant functional disability and depressive symptoms. These changes may have a negative influence on the performance of daily living and work activities, with consequent impact on the quality of life (QOL) ⁽¹⁾.

The RA activity and the degree of joint damage are critical in the evolution of the dysfunction. They had been measured by objective instruments, like the disease activity score for 28 joints (DAS-28)⁽²⁾. The ACR criteria measure the difference between two evaluation moments in a patient using joint assessment, patient and physician global assessment, the health assessment questionnaire (HAQ)⁽³⁾.

Moreover, the Disease-specific instrument included to measure functional limitations, the HAQ in RA

was closely correlated to the physical functioning dimension of the 36-item short form (36-SF) health survey, therefore SF-36 is considered a valid instrument for measuring physical functioning and comparing different aspects of HRQoL in patients with RA⁽⁴⁾.

Aim of the work:

The aim of this work was to investigate the relationship between quality of life (QOL) and disease activity in patients with rheumatoid arthritis (RA).

Patients and Methods:

This study was carried on 200 rheumatoid arthritis patients fulfilled the 2010 new classification criteria⁽⁵⁾. The patients were recruited from the Rheumatology and Rehabilitation outpatient and inpatient clinics at Sohag and Assiut University Hospitals. The Ethical committee of both University Hospitals approve the design of this study.

Methods:

It is a cross sectional study. All patients performed laboratory investigations and underwent a medical examination by a single rheumatologist who also determined the disease duration and assessed the disease activity score in 28-joints (DAS-28). Patients were classified as in remission (<2.6), low (2.6 - <3.2), moderate (3.2 - 5.1), and high (>5.1) disease activity. HRQoL was measured via the Medical

Outcomes Study 36-SF health survey and Health Assessment Questionnaire (HAQ) scores.

Statistical analysis:

Date entry and data analysis were done using SPSS version 23 (Statistical Package for Social Science). Data were presented as number, percentage, mean, standard deviation. ANOVA was used to compare means among groups. P-value was considered statistically significant when $P < 0.05$.

Results

This study included 200 patients with rheumatoid arthritis fulfilled 2010 ACR/EULAR classification criteria.

Table (1) shows demographic and clinical data in the study control group.

Table (2) shows comparison of HAQ and SF-36 according disease activity in the study group, with significance difference ($P < 0.05$).

Table (1): Demographic data in study & control groups.

Item	Study group "n=200"
1- Age "years"	43.68±9.35
2- Sex (Male:Female)	20:180
3- Marital status ^b	
• Single	24(12.0%)
• Married	176(88.0%)
4- Clinical Data	
• Arthralgia	172(86.0%)
• Swelling	170(70.0%)
• Deformity	44(22.0%)
• Constitutionals symptoms	96(48.0%)
• Extra. Art. manifestations	1.79±0.96
• D.M	4(2.0%)
• Disease duration "years"	1.79±0.96
• Morning Stiffness "minutes"	27.0±5.87
5- Disease activity (DAS28-ESR)	
• Low	55(27.5%)
• Moderate	80(40.0%)
• High	65(32.5%)

Table (2): Comparison of rheumatoid factor "RF", Anti - CCP , HAQ and SF-36 data according disease activity in study group.

Item	Mild "n=55"	Moderate "n=80"	High "n=65"	p-value
HAQ	1.02±0.02	1.75±0.05	3.22±1.38	$P < 0.001^{**}$
SF-36	86.67± 4.56	74.23±2.45	45.62±2.57	$P < 0.001^{**}$

Discussion

Rheumatoid arthritis (RA) is a chronic inflammatory polyarthritis with a prevalence of 0.5% to 1% in the general population.¹ It has been accepted that initiating RA treatment at the early stage of disease improves clinical outcomes and prevents further joint destruction⁽⁵⁾.

Because of the variable expressions of RA, different indices have been defined to evaluate the disease activity and response to treatment, for instance, Disease Activity Score in 28 Joints (DAS28) and Clinical Disease Activity Index (CDAI)⁽⁶⁾.

In present study there were highly significance difference between disease activity and both of SF36 and HAQ.

Our findings are in agreement with other study from India, Patients with RA were found to have greater reduction in QOL than those without Ex. RA⁽⁷⁾.

We therefore conclude that the SF-36 is a valid instrument for measuring physical functioning and comparing different aspects of health related QOL in patients with RA. Moreover the SF-36 captures a wider range of disability in RA, in which comorbidity may also have an important role.

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