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Sexual Self-Concept and General Health in Rheumatoid Arthritis Patients

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Background: There are several studies regarding sexual dysfunction in chronic diseases such as diabetes and renal failure; however, no significant study has been done on Iranian rheumatoid arthritis (RA) patients.

Objectives: In this study, we aimed to identify and compare sexual dysfunction between RA patients and the normal population.

Patients and Methods: In this case-control study, two groups of females (87 RA patients and 89 controls) were randomly selected from the rheumatology clinic of Baqiyatallah Hospital, Tehran, Iran. General health questionnaire (GHQ-28) and multidimensional sexual self-concept questionnaire (MSSCQ) were used to evaluate RA patients. We used SPSS for statistical analysis mainly by the t-test and chi-square test. P values less than 0.05 were considered significant.

Results: In the GHQ-28 evaluation, RA patients had lower social function; however somatization rated higher in normal patients ($P < 0.05$). Sexual health was lower in the RA population ($P < 0.05$). No significant difference was found in sexual desire. Except sexual pain, other sexual health parameters were lower in RA patients. The scores were as follow: sensation 13.6 ± 4.4 vs. 12.2 ± 4.5, $P = 0.024$; lubrication 6.9 ± 2.1 vs. 6.2 ± 2.1, $P = 0.017$; orgasm 10.4 ± 2.8 vs. 9.5 ± 3.2, $P = 0.37$; pain 10.1 ± 2.2 vs. 10.8 ± 1.9, $P = 0.013$; enjoyment 23.8 ± 5.8 vs. 21.3 ± 7.5, $P = 0.009$ and partner related - 8.5 ± 1.7 vs. 7.6 ± 2.4, $P = 0.005$. Furthermore, the concern of losing their sexual partner was higher in the normal population.

Conclusions: Our study demonstrated that almost all GHQ and MSSCQ parameters were lower in RA patients, which indicates lower quality sexual life in RA patients. We recommend further consideration for the treatment and care of these patients.

Keywords: Rheumatoid Arthritis; Sexual Dysfunction; Physiological; Health

1. Background

Rheumatoid arthritis (RA) is an autoimmune disease that results in a chronic, systemic inflammatory disorder that may affect many tissues and organs, but principally attacks flexible (synovial) joints. It can be a disabling and painful condition, which can lead to substantial loss of functioning and mobility if not adequately treated. Rheumatoid arthritis is one of the most important causes of morbidity and mortality and the patients may experience a lack of self-confidence and body image. These conditions can result in low quality of life (1, 2).

Studies demonstrated that anxiety and stress resulting from RA cause sexual dysfunctions; reports have revealed a range of 31% to 76% (3, 4). There are studies that report higher rate of divorce due to sexual activity difficulties or inability. Pain, joint stiffness, low self-confidence, and lack of body image are accounted as the most important reasons, even in patients under treatment. Depression and pain can cause a decrease in sexual desire; however, physical dysfunction usually interferes with easy sexual activity. Concerns regarding pregnancy, low sexual desire, difficulties in sexual positions and lower rate of orgasms are reported as the most important issues in women with RA (5-7).

2. Objectives

There are several reports of sexual dysfunction in other chronic diseases such as diabetes and renal failure in Iran; however, as far as our concern, only a few studies have considered sexual disabilities in RA patients. Therefore, this study aimed to evaluate sexual dysfunction in female RA patients and compared these candidates to normal individuals.

3. Patients and Methods

This was a case-control study. The sample size was calculated by the sample size formula for comparing two proportions ($P_1 = 25\%$, $P_2 = 10\%$, $\alpha = 0.05$ and $\beta = 0.2$), resulting in 87 individuals for each group. The case group consisted of 110 randomly selected married female RA patients referred to the Rheumatologic ward of Baqiyatallah hospital, Tehran, Iran (the Hospital affiliated

to Baqiyatallah University of Medical Sciences; referral hospital and their next of kin) during March 2012 and March 2013. The control group (90 individuals) was recruited from normal individuals from the patients' next of kin. All individuals were aware of the study and filled out a consent form to enter our study. All individuals were aware of the study and filled out a consent form to enter the study (Ethical code 903, Year 2012). All patients were diagnosed by the American College of Rheumatology criteria for RA, were married with active sexual life and able to read and understand the Persian Language. Patients with any other diagnosed organic, sexual or psychological disorder were not included in our study.

All individuals were asked to fill out a checklist regarding demographic information (age, marriage date and husband's age) and previous medical conditions such as hypertension, diabetes and pain. The checklist also consisted of questions regarding their history of RA (time from diagnosis, flare up, etc.). Furthermore, all patients answered the multidimensional sexual self-concept questionnaire (MSSCQ) and the 28-question version of the general health questionnaire (GHQ-28).

Multidimensional Sexual Self-Concept Questionnaire (MSSCQ) is the most useful tool for evaluating sexual self-concept, which was developed by William Snell at the Department of Psychology in South East Missouri University in the 1990s. This questionnaire consists of 100 items in 20 dimensions, five items per dimension, covering cognitive (sexual self-schemata), emotional (sexual depression), and motivational (sexual motivation) aspects. The Cronbach's alpha coefficient range is between 72% and 94%. Ramezani et al. (8) translated and validated the Farsi version of this questionnaire (Cronbach's α: 0.89). Furthermore, GHQ-28 is also known as the best questionnaire for general health, though it is a truncated version of the original 60-question version. It had an acceptable content validity in the present study, and its correlation with GHQ-28 was also found to be high (Cronbach's α Confidence interval = 0.87-0.93) (9). The patients with GHQ-28 scores higher than normal were excluded from the study.

3.1. Statistical Analysis

All data were analyzed by SPSS. The data are expressed by mean ± standard deviation (SD) and percentages. Statistical analyses such as student's t-test and multivariate analysis of variance (MANOVA) were used because all of our variables were normally distributed demonstrated by the Kolmogorov-Smirnov test. P-values less than 0.05 were considered significant.

4. Results

Two-hundred patients were enrolled in the study; however, 24 individuals with high GHQ-28 and five patients from the case group were excluded due to lack of information and incomplete data. At the end, 87 cases and 89 controls were evaluated. The mean age of the patients and their husbands were 40.12 ± 4.07 and 45.34 ± 6.55 years. Significant difference was seen between the RA and healthy group regarding both the participants and their husbands (37.46 ± 2.12 vs. 42.00 ± 1.90, $P < 0.001$ and 41.45 ± 1.67 vs. 49.33 ± 1.21, $P < 0.001$; respectively).

In the GHQ-28 evaluation, RA patients had lower social function; however somatization rated higher in normal patients ($P < 0.05$). Depression and anxiety domains were not significantly different between the two groups.

All domains of the MSSCQ were evaluated. The RA patients were not significantly different from healthy individuals regarding sexual desire; however, as seen in Table 1, other domains were significantly lower in the RA group. Surprisingly, fear of losing their relationship was higher in the normal group. In Table 2, MANOVA was used to eliminate the age difference between the two groups. As indicated, except desire and cognition domains, other domains still had significant differences.

Table 1. Domains of the Multidimensional Sexual Self-Concept Questionnaire Evaluated Between the Two Groups [a]

Group	Number of Subjects	Values	T	P Value
Desire			0.336	0.728
Healthy	89	17.86 ± 3.75		
RA	87	17.63 ± 5.49		
Sensation			2.277	0.024
Healthy	89	13.69 ± 4.49		
RA	87	12.23 ± 4.53		
Lubrication			2.403	0.017
Healthy	89	6.94 ± 2.12		
RA	87	6.22 ± 2.13		
Cognition			0.55	0.59
Healthy	89	6.31 ± 1.70		
RA	87	6.16 ± 2.03		
Orgasm			2.103	0.037
Healthy	89	10.44 ± 2.87		
RA	87	9.52 ± 3.27		
Pain			-2.6	0.013
Healthy	89	10.09 ± 2.28		
RA	87	10.86 ± 1.94		
Enjoyment			2.569	0.009
Healthy	89	23.82 ± 5.86		
RA	87	21.33 ± 7.54		
Partner related			2.873	0.005
Healthy	89	8.52 ± 1.75		
RA	87	7.67 ± 2.42		

[a] Abbreviations: RA, rheumatoid arthritis.

Table 2. Multivariate Analysis of Variance Was Used to Eliminate the Age Difference Between the Two Groups [a,b,c]

Dependent Variables	Mean Square	F	P Value
Desire	51.261	2.595	0.109
Sensation	183.004	9.519	0.002
Lubrication	43.906	10.296	0.002
Cognition	6.602	1.987	0.160
Orgasm	83.880	9.494	0.002
Pain	24.780	5.625	0.019
Enjoyment	544.184	12.680	0.000
Partner related	28.911	6.269	0.013

[a] Abbreviations: RA, rheumatoid arthritis.
[b] Independent variable was group RA healthy.
[c] Degree of freedom was equal to 1.

5. Discussion

This study evaluated sexual dysfunction in RA patients. As indicated by the results, significant differences were found between the groups; however sexual desire was not different among groups. Even by adjusting the analysis with age, the results mainly remained the same.

Regarding studies on this issue, both men and women can develop sexual dysfunction. In a study published in Clinical Rheumatology in 2011, 54% of men and 46% and women with RA present signs of sexual dysfunction. Women usually bear with anorgasmia and low arousal; while men experience erectile dysfunction (10).

Our study demonstrates that both GHQ-28 and MSSCQ in RA patients score lower than the normal population with the difference being significant. These results show that RA patients are less healthy and present more sexual problems. Patients with RA are usually supervised by several specialists, and different types of drugs; however, most patients do not complain from this issue. Low sexual activity can have a negative impact on general health, resulting psychological disorders, lower compliance and higher RA issues. Paying attention to patients' sexual problems can help the treatment of RA, especially in younger patients (11).

Other studies have demonstrated similar results. The prevalence of sexual dysfunction in RA has been reported to be between 30% and 60%. However, the causes of this dysfunction vary in different studies. Fatigue and tiredness from daily activity plus pain are the most important causes of sexual dysfunction and low desire. Some studies revealed that limited range of motion and position difficulties are the main causes; we however divided the causes in two groups of organic and psychiatric for sexual dysfunction in RA patients. These conclusions are consistent with our study outcomes, as both GHQ-28 and MSSCQ results were worse in the RA group (4, 12-14).

Sexual life is one of the most important factors in one's life, which requires a free mind, enough body force and least pain, fatigue and motion limitations. All these factors are altered in RA. Disorder severity, fatigue and pain levels, motion limitation, weight resistance inability and decreased self-confidence and furthermore, adverse effects of the multiple drugs used by the patients and sometime the side effects of the surgeries are accounted as the main causes of inference in sexual activity of patients with RA. However RA is not the only disease that interferes with sexual life. Other rheumatologic disorders such as lupus fibromyalgia, scleroderma, osteoarthritis, Sjogren's syndrome and juvenile arthritis have the same effects. The most important disorders listed by the patients were: decreased libido and arousal, low coitus, limitation in rhythmic movements, vaginal dryness, anorgasmia, impotence and erectile dysfunction. Educational programs and psychological consultation for RA patients regarding sexual limitations may be useful (4, 10-15).

As our study, the first to evaluate MSCCQ in RA patients in Iran, was limited to only one rheumatologic center with low sample size, generalization of the results to the target population or to other rheumatologic disorders in hampered. Therefore, we suggest larger sample sizes and inclusion of other chronic diseases in future studies to extract more information. Furthermore, due to some stigma regarding both sexual information and disease functionality, other studies are needed to evaluate other aspects of sexual dysfunction such as satisfaction and relationship indexes.

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