ORIGINAL ARTICLE

Sexual dysfunction in women with rheumatoid arthritis

Huriye Aras[1], Bekir Aras[2], Afitap Icagasioglu[3], Yasemin Yumusakhuylu[3], Eray Kemahli[4], Sema Haliloglu[3], Fusun Moral Oguz[3]

[1]Department of Physical Medicine and Rehabilitation, Yoncali Physical Medicine and Rehabilitation Hospital, Kutahya, [2]Department of Urology, University of Dumlupinar, School of Medicine, Kutahya, [3]Department of Physical Medicine and Rehabilitation, Goztepe Training and Research Hospital, Istanbul, [4]Department of Urology, University of Abant Izzet Baysal, School of Medicine, Bolu; Turkey

ABSTRACT

Aim Rheumatoid Arthritis (RA) is a widespread disease which leads to various degrees of disability and profound impact on overall life quality of the patient with regard to social, economic, psychological and sexual aspects. It may be assumed that RA can affect sexual function. The aim of this study was to evaluate the sexual function in female subjects with RA.

Methods A total of 186 married women (age range 30-60 years) were included in this study. Of the total participants, 104 were RA patients and 82 were healthy women. Hospital anxiety and depression scale (HADS), Health Assessment Questionnaire (HAQ) and Disease Activity Score (DAS) were used to evaluate the differences between the controls and patient group. Sexual functions were evaluated using the validated Female Sexual Function Index (FSFI).

Results The mean age of the RA patients and controls was 46.71 ± 7.65 and 43.98 ± 7.97, respectively. According to the total sexual function score evaluation, 97 out of 104 women with RA (93.7 %) and in 53 out of 82 women in control group (64.6 %) were regarded as having sexual dysfunction (SD). There was significant difference between these two subgroups with regard to only depression factor.

Conclusion Current results have demonstrated that patients with RA have had a higher sexual dysfunction rate, when compared with the control group. SD may be related to perceived depression, which are frequently encountered conditions in patients with RA.

Key words: autoimmunity, rheumatic diseases, sexual health.

Corresponding author:
Bekir Aras
School of Medicine Department of Urology, University of Dumlupinar
43100 Kutahya, Turkey
Phone: +90 505 312 45 63;
Fax: +90 274 265 20 14;
E-mail: bekiraras1@gmail.com

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INTRODUCTION

Rheumatoid arthritis (RA) is a chronic, multisystemic, inflammatory and autoimmune disease with unknown etiology (1). It is also defined as a synovial disease, which can also affect other organs and systems (2). Physiological and anatomical impairments in RA result in decreased general life quality in most patients (2). Sexuality has a significant place in human life and remains to be important for both men and women despite the aging factor (3).

Female sexual dysfunction (FSD) is a common health problem, which is affected by medical and psychosocial factors (4). In contrast to basic and clinical research conducted in male sexual dysfunction field, women with sexual dysfunctions have received relatively poor attention and they commonly remain untreated (5).

The female sexual response cycle depends on several factors including vasculogenic, neurogenic, musculogenic, psychogenic and hormonal factors (5). A possible deterioration or impairment in any of these factors can result in FSD (5). In the manifestation of FSD, the following conditions can be observed: decrease in sexual desire, arousal, orgasm and / or sexual pain which can result in significant personal distress and may compromise the overall health status of women (5,6). In RA patients, diminished sexual motivation, competence and expression lead to marital unhappiness (7,8), which in turn may even result in divorce and termination of the relationships when sexual functionality becomes difficult or impossible.

Although sexual dysfunction is a significant problem in RA, there is inadequate information about this condition possibly because both patients and physicians avoid talking about sexual issues (7,9). We have evaluated sexual functionality in female subjects with RA by using the validated Female Sexual Function Index (FSFI), Hospital Anxiety and Depression Scale (HADS), Health Assessment Questionnaire (HAQ) and Disease Activity Score (DAS) and compared them with healthy controls.

PATIENTS AND METHODS

A total of 157 females between 30 and 60 years of age with RA and 82 healthy controls with active sexual life were initially included in this study. Female patients with RA according to American College of Rheumatology (ACR) criteria, were evaluated at the Department of Physical Medicine and Rehabilitation (10). The women with inflammatory genital disease or vaginal discharge, neurologic or endocrine disease; a history of psychiatric disorders or receiving antidepressants or antipsychotic medication or any other drugs possibly affecting the sexual or psychiatric status; who were single, widowed, pregnant, heavy smokers, and immunocompromized women were excluded. After excluding 53 patients, 104 women with RA and 82 healthy women were accepted for the research. The Ethical Committee of Human Studies and Research approval and confirmation was obtained prior to the initiation of the study. A written informed consent form was obtained from each participant during the initial inclusion. Demographic data regarding each individual including age, marital status, education level and chronic disease condition were recorded.

Hospital Anxiety and Depression Scale (HADS) included anxiety and depression states of all patients and controls. All participants had detailed interviews for anxiety and depression by HADS results. Participants completed the Turkish validated forms themselves (11). This form included 14 questions related to anxiety and depression symptoms. Cut-off points for Turkish version of the scale have been defined as 10 for the anxiety subscale, and 7 for the depression (11). Disease Activity Score (DAS) 28 was used for the evaluation of the disease activity. This scoring takes into account the number of swollen joints (NSJ), sensitive joint number (SJN), sedimentation rate (Sed) and overall level of pain on a visual 10 mm pain scale (VAS). The final score is then calculated by the following formula:

DAS 28 =(0.56 x SJN½) + (0.28 x NSJ½) + (0.7 x In(Sed)) + VAS (mm).

Values are classified as follows: remission ≤ 2.4; low disease activity 2.4-3.6; moderate disease activity 3.6-5.5; and severe disease activity ≥ 5.5 (12).

Health assessment questionnaire (HAQ) was used to evaluate the functional capacity of the study participants. The questionnaire evaluates the ability to perform daily activities such as dressing, eating, walking, hygiene, etc. The responses are scored and shown to correlate well with indicators of disease activity (13).

The Female Sexual Function Index (FSFI) described by Rosen et al., includes the domains of sexual desire, arousal, lubrication, orgasm, satisfaction and pain during sexual intercourse (14). The FSFI is a brief, self-reporting questionnaire that evaluates the female sexual function. Turkish version of the FSFI is reliable and valid in Turkish population (15). According to this local scale, the overall score and sub-scores of sexual functional status in patients and controls were calculated. The patients with an overall score less than 26.5 were considered as having SD.

For statistical analysis, Student-t and Chi-Square tests were used. P values less than 0.05 were considered as statistically significant.

RESULTS

Mean ages of the patient and the control groups were 48.65 ± 8.59 and 46.71 ± 7.65 years, respectively (p > 0.05). Mean disease duration was 9.3 years (Table 1). The rate of chronic disease in the patients group with RA was prominently higher than the controls (p = 0.007).

Table 1. Rheumatoid arthritis patients and control demographic data

	No (%) of patient (n=104)	**No (%) of controls** (n=82)	p
Mean age (year)	48.65±8.59	46.71±7.65	0.981
Job Status:			
Working	18 (17)	11 (13)	0.467
Not working	86 (83)	71 (87)	
Chronic cigarette smoking			
Yes	19 (18)	13 (16)	0.779
No	85 (82)	69 (84)	
Chronic Disease			
Yes	58 (56)	26 (32)	0.007
No	46 (44)	56 (68)	
Menopause			
Yes	39 (38)	25 (30)	0.347
No	65 (62)	57 (70)	
HAD Score			
Anxiety	9.47±4.28	9.22±3.73	0.684
Depression	6.90±3.35	7.70±4.05	0.173

HADS score, Hospital Anxiety and Depression Scale score;

In the present study, 97 (out of 104 93.7 %) women with RA group and 53 (out of 82 64.6 %) healthy women had SD, according to the total sexual function score evaluation. Mean FSFI score of the patient group was significantly lower than the controls (p<0.01). Desire, arousal, lubrication, orgasm, satisfaction, pain and total score parameters of sexual function in the RA group were significantly lower when compared with the control group (p<0.01) (Table 2).

Table 2. Mean age and the Female Sexual Function Index subgroup scores (mean)

Values	**Patient group** (mean ± SD)	**Control group** (mean ± SD)	p
Age (year)	48.65±8.59	46.71±7.65	0.117
Desire	2.1±0.9	3.02±0.81	< 0.01
Arousal	3.0±1.2	3.4±0.9	< 0.01
Lubrication	3.6±1.2	5.1±0.9	< 0.01
Orgasm	2.0±0.9	3.9±1.3	< 0.01
Satisfaction	2.05±0.9	3.9±1.3	< 0.01
Pain	3.65±0.9	5.1±1.1	<0.01
Total Score	19.1±4.7	24.6±4.2	< 0.01

No relationship between SD and both DAS 28/HAQ scores could be found in RA patients (p>0.05). When evaluating RA patients with or without SD by means of anxiety and depression measured according to HADS scoring system, there was a significant difference between these two subgroups with regard to only depression factor (p=0.021) (Table 3).

Table 3. Assessment of rheumatoid arthritis group with sexual dysfunction

	Mean ± SD (median) of sexual function		
Test	**Without dysfunction** (n=7)	**With dysfunction** (n=97)	p
HADS score			
Anxiety	6.0 ± 3.63 (6.5)	9.41 ± 3.66 (10.0)	0.050
Depression	4.0 ± 2.89 (4.0)	7.92 ± 4.02(8.0)	0.021
DAS28	3.95 ± 2.43 (3.75)	3.86 ± 1.40 (3.83)	0.917
HAQ	10.33 ± 10.30 (6.50)	12.42 ± 7.51(11.0)	0.308

HADS score, Hospital Anxiety and Depression Scale score; DAS 28, Disease Activity Score 28; HAQ, Health Assessment Questionnaire;

Of the total 104 patients with RA, 58 (55.8%) had chronic disease, whereas 46 (44.2%) had no chronic condition. There were only three (2.8%) patients with normal sexual functionality versus 55 (53%) with SD in the first fraction and only four (3.8%) patients had normal sexuality versus 42 (40.4%) RA patients with SD in the latter.

There was no difference between these two subgroups of RA patients with or without chronic disease by means of SD (p=0.476).

DISCUSSION

Rheumatoid arthritis inevitably leads to various degrees of disability and it has a profound impact on patient's life with regard to social, economic, psychological and sexual aspects (16). For some reasons, it may be assumed that RA can influence sexual functions. Women with RA suffer from pain, restricted joint movements and fatigue and they can have problems with self-esteem and

esthetical appearance (17). In previous studies, the prevalence of between 31-76% arthritic patients who experience sexual problems have been reported (8, 18-20). In most studies, subjective interviews or self-constructed / self-reported questionnaires have been used. Furthermore, studies considerably carried out a difference by means of the method preferred, with only a few using healthy controls (8,21,22). In the present study, the control group was also evaluated, and FSFI, which is a specific test for evaluating sexual function, was used.

Van Berlo et al. have reported that women with RA felt less desire for sexual intercourse and fantasized less frequently than healthy controls, and women with RA had even less problems than controls (17). This, however, does not mean that RA women do not have problems during sexual activities (17). This study has found that RA patients had dysfunction in all parameters of FSFI, when compared with the controls, and FSD was very common among the women with RA, and whole FSFI domains were found to be affected.

There can be various causes of SD in RA patients. A considerable percentage of the patients, especially women, indicated that they have trouble with their joints during sexual activities (17). For the women, physical function, disease activity and duration of the disease did not have an influence on sexual problems (17). This result may confirm the idea that women generally place a different value on sexuality, focusing more on social, cultural and emotional factors, while men are more focused on their bodies (17,23). The present study shows no relationship between SD and both DAS and HAQ.

Physiological changes (sexual dissatisfaction, having less sexual desire and being less sexually active, distress in the joints during sexual activities etc.) due to RA are apparently independent from those on a psychological level Direct squeal of the disease such as pain, fatigue and stiffness may interfere with sexual functioning (24). Thus, changes in sexual functioning after the onset of a chronic disease do not automatically lead to sexual problems.

The results of this study have shown that 93.7% of RA patients had SD and this rate was higher when compared with the literature (19-20) . However, it should be realized that SD was not related with RA disease activity, chronic disease condition and age.

Several disease-related symptoms and psychological variables were listed as possible determinants of SD in RA in older studies (7,8,16,21). Gutweniger et al. have found that morning stiffness in female RA patients have had an important role in experienced sexual dissatisfaction (25). Kraaimaat et al. have found that physical disability, pain and depression contribute to the intrusiveness of RA on sexuality (20).

Depression is a common problem in RA patients. In a previous study (26), it was found that 23% of RA patients were clinically depressed. Depression is also significantly related with pain (26) and both sexual dissatisfaction and depression were found to influence pain in RA (9). In this study, SD was correlated with depression and this was a possible explanation of 93.7 % of the variance of SD. Depression was the variable that significantly related with SD - this finding was in accordance with the previous studies (8,16, 20).

Furthermore, medications and especially selective serotonin re-uptake inhibitors used to treat depression can affect the female sexual response. Women who receive these medications often complain about decreased desire, arousal and genital sensation along with difficulty in achieving orgasm (27). Drug treatment cases were excluded from this research to preclude the possible drug effect on SD subjects. Thus, we believe that the detected SD was closely related to RA.

As a result, it can be concluded that SD is not rare among the patients with RA. Sexual dysfunction was observed to be related to depression in RA patients. Also, significant physical disability changes in females with RA were found to further interfere with sexual dysfunction. Taken together, this evidence suggest that RA disease has an important effect on sexual functionality and this effect can also be synergistically increased with the contribution of depression state.

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Competing interests: none to declare.

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