
Evaluation of Sexual Dysfunction in Female Patients with Fibromyalgia Syndrome

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ABSTRACT

Objectives: The aim of our study is to determine the presence and quality of sexual function in women with fibromyalgia syndrome and to compare it with the normal population.

Materials and methods: In our case-control study was conducted on sexually active 46 fibromyalgia patients who were diagnosed according to the American College of Rheumatology (ACR) criteria and 35 healthy control aged between 20-55. The data was collected with Beck Depression Inventory (BDI), Female Sexual Function Index (FSFI), Fibromyalgia Impact Questionnaire (FIQ) and Visual Analogue Scale (VAS). The clinical characteristics of both groups were compared and the relationships between FSFI and clinical parameters were evaluated.

Results: Both groups were similar in terms of age, duration of marriage, number of children, family type and educational level. The mean duration of complaints in women with fibromyalgia was 5.62 (3.45) years, FIQ score was 59.8 (12.2) and VAS score was 7 (2). FSFI score was 13.2 (8.1) in group 1 and 32.1 (5.2) in group 2 ($P<0.05$). The mean scores of FIQ, BDI and VAS in group 1 were significantly higher than those in group 2 ($P<0.05$). In addition, a significant negative correlation was determined between the total FSFI score and FIQ and BDI scores in group 1.

Conclusion: Negative effects of sexual dysfunction on female patients should be considered when evaluating fibromyalgia. It should be noted that sexual function assessment must be a part of fibromyalgia syndrome treatment. Further studies are needed to elucidate the relationship between fibromyalgia and sexual dysfunction

KEY WORDS: Fibromyalgia, Sexual dysfunction, Depression

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INTRODUCTION

Fibromyalgia syndrome is a common disease characterized by chronic, diffuse musculoskeletal pain with paresthesia, fatigue, sleep disturbance and painful tender points in a symmetric distribution [1]. American College of Rheumatology (ACR) 2010 criteria standardized the diagnoses process for FM. These criteria are appropriate and sufficient for the diagnosis of patients, clinical diagnosis and epidemiological research [2].

FM frequently affects women between the ages of 30-50, and according to the studies conducted, the prevalence is between 1-4% of the entire population and ranges between 2.5-10.5% in women [3, 4].

The etiology of fibromyalgia has not been fully elucidated yet. Several mechanisms are thought to shape FM. Some biochemical, neurohormonal, central nervous system, immunological, psychological, and environmental factors have been found to play a role in the disease. It is suggested that genetic factors affecting peripheral and central pain mechanisms contribute to the diffuse chronic pain felt by FM patients [5, 6].

Sexual dysfunction affects 30-60% of women at least once in their lifetime, and the most common forms are low sexual desire, pain, problematic orgasm, and reduced sexual arousal [7]. In recent years, sexual dysfunction disorder has been commonly reported by FM patients. Studies have shown a

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significant decrease in the sexual desires of women with fibromyalgia. Common causes of sexual problems include the avoidance of sexual contact with partner due to tenderness, depression, fatigue and pain [8].

The aim of our study is to determine the relationship between and quality of FM and sexual dysfunction in women and to compare them with the general population.

MATERIALS AND METHODS

Study Design and Patients

Newly and previously diagnosed 46 pre and perimenopausal FM patients (group 1) who applied to the Physical Medicine and Rehabilitation outpatient clinic and 35 healthy, asymptomatic pre and perimenopausal women (group 2) were included in the study. The diagnosis of FM was made according to the ACR 2010 diagnostic criteria after anamnesis and physical examination. Patients in the postmenopausal period, pregnant women, those with pelvic or gynecological surgery history, hormonal disorders, patients with additional rheumatological disease and serious psychiatric disorders were excluded from the study. All patients participating in the study were informed and informed consent forms were obtained.

Data collection

Menopausal status, marital status, number of pregnancies, number of live births, number of children, duration of diagnosis (years), educational status, surgical history, concomitant systemic disease, medications, family history, lifestyle, smoking and alcohol habits were examined for both groups.

Fibromyalgia Impact Questionnaire (FIQ) and Visual Analog Scale (VAS) were used to evaluate the daily life activities of all patients in both groups, Beck Depression Inventory (BDI) to determine depression levels, Female Sexual Function Index (FSFI) to evaluate sexual function quality; and all data were recorded and the results were compared. The clinical features in both groups were compared and the potential correlation between FSFI and clinical parameters were evaluated.

Statistical analysis

IBM SPSS version 22 (IBM Co., Armonk, NY, USA) was used for statistical analysis. One-sample Kolmogorov-Smirnov test was used to measure compatibility with normal distribution. Student-t, Mann-Whitney U and Chi-Square tests were used to compare the parameters of the study

groups. Stepwise regression was performed to determine which demographic and clinical variables (FIQ and BDI) were the best determinants for the FSFI score. P value less than 0.05 was considered statistically significant.

RESULTS

Both groups were similar in terms of age, duration of marriage, number of children, family type and education level. Demographic data of both groups are given in Table 1. The mean age in group 1 was 37.47 (4.46) years, and 36.58 (5.63) years in group 2. The mean duration of complaint in group 1 was 5.62 (3.45) years.

Table 1: The socio-demographic characteristics of the groups

	FM (group 1) (n=46)	Control (group 2) (n=35)	P-value
Age (years)	37.47 (4.46)	36.58 (5.63)	0.086
Disease duration (years)	5.62 (3.45)	-	-
Marriage period (years)	14.56 (6.7)	11.39 (5.82)	0.064
Educational status, n (%)			0.072
Primary school	25 (54.3%)	18(51.4%)	
High school	12 (26.1%)	10(28.6%)	
University	9 (19.6%)	7(20%)	
Working status, n (%)			0.234
working	20 (43.4%)	14 (40%)	
Not working	26 (56.6%)	21 (60%)	

n: number, FM: fibromyalgia

FSFI score was 13.2 (8.1) in group 1 and 32.1 (5.2) in group 2 ($P<0.05$). Total FSFI scores and subunit scores (desire, arousal, orgasm, satisfaction, and pain) were significantly lower in the patient group ($p<0.05$). The mean FIQ, VAS and BDI scores in group 1 were significantly higher than the control group ($p <0.05$) (Table 2).

Strong negative correlation was determined between FSFI, FIQ and BDI scores in group 1 ($r = -0.686, P=0.001$ and $r = -0.736, P=0.001$; respectively).

Table 2: VAS, FIQ, BDI and FSFI total and subgroup scores of the groups

	FM (group 1) [mean (SD)]	Control (group 2) [mean (SD)]	P-value
VAS	7 (2)	3 (1)	0.001
FIQ ^a	59.8 (12.2)	17.2 (3.1)	0.0001
BDI ^b	21.3 (6.8)	7.8 (3.4)	0.0001
FSFI total score	13.2 (8.1)	32.1 (5.2)	0.001
Desire	2.1 (1.4)	5.6 (1.6)	0.002
Arousal	2.2 (1.2)	5.2 (1.4)	0.0001
Lubrication	2.4 (1.6)	5.8 (1.6)	0.003

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Orgasm	2.6 (1.1)	5.5 (1.2)	0.001
Sexual satisfaction	1.8 (1.3)	5.3 (1.8)	0.002
Pain	2.1 (1.5)	4.7 (1.9)	0.003

FM: fibromyalgia, VAS: visual analog scale, FIQ: fibromyalgia Impact Questionnaire, BDI: beck depression inventory, FSFI: female sexual function index

^a Strong negative correlation between FSFI and FIQ ($r = -0,686$)

^b Strong negative correlation between FSFI and BDI ($r = -0,736$)

DISCUSSION

In patients with fibromyalgia, psychiatric disorder comorbidity and psychiatric symptoms were significantly higher compared to the healthy control and rheumatic disease groups. These may include depression and anxiety disorders, post-traumatic stress disorder (PTSD), dissociative disorders and somatoform disorders associated with childhood and adulthood traumas. Sherman et al. (9) found PTSD-like symptoms in 52 (56%) of 93 patients followed with the diagnosis of fibromyalgia. Hauser et al. [10] compared 395 fibromyalgia patients with 395 healthy individuals in control groups, PTSD was found to be 45.3% in the fibromyalgia group and 3% in the control group, and possible depressive disorder was 65,6% and 4,8%, respectively.

Studies conducted with the patients with fibromyalgia show that there is no muscle pathology in patients with FM, and studies conducted with healthy control groups indicate that pain-related biochemical substances such as serotonin, substantia P and galanin can be seen in muscles; and are also present at normal levels in patients with fibromyalgia [11, 12]. Many studies report the rate of sexual dysfunction in patients with chronic pain, and since FM is a disorder characterized by chronic diffuse pain, the same relationship is expected to be seen in FM, too [13, 14].

However, in the study conducted by Orellana et al., [15] 31 fibromyalgia, 26 rheumatoid arthritis patients and 20 healthy women were compared, and it was found that sexual dysfunction rates were similar in patients with fibromyalgia and rheumatoid arthritis, although the pain level was higher in patients with fibromyalgia. According to the analysis, it was concluded that the only factor associated with sexual dysfunction is depression. On the other hand, the study conducted by Tıkız et al. [16] with 40 FM patients, 27 patients with FM and major depression and 33 healthy volunteer women investigated the effect of depression in patients with FM on sexual functions. They found that only diffuse pain is associated with sexual dysfunction in FM patients and that depression comorbidity does not have a negative effect on sexual functions. In our study, depression scores were higher in women with fibromyalgia than in healthy individuals, and sexual dysfunction reported in fibromyalgia was associated with the increase in depression.

In a comparative study conducted with FM patients and healthy volunteer women, no difference was observed in arousal and orgasm phases, but it was found that women with fibromyalgia had more complaints about insensitivity in the genital area before, during and after sexual intercourse [17].

In a different study conducted with 48 women with fibromyalgia and 38 healthy women, BDI scores were found to be higher, however, FSFI scores were found to be lower in women with fibromyalgia. Reduced sexual desire was found to be the most common sexual problem in women with fibromyalgia. A negative correlation was found between FSFI scores and BDI scores in women with fibromyalgia, as such relationship was not observed in healthy women [18]. In our study, a strong negative correlation was also found between FSFI and BDI scores in patients with fibromyalgia. In addition, the frequency of sexual intercourse, satisfaction, avoidance and orgasmic dysfunction subgroup scores were found to be significantly higher in FM patients compared to the control group.

There are some limitations in our study. While evaluating the effects of fibromyalgia, a multifactorial condition, on sexual function in women, factors that affect sexual function and accompany fibromyalgia such as stiffness, fatigue, sleep disturbance, stress, etc. have not been taken into consideration.

In this study, we examined the risk factors that increase the severity of sexual dysfunction in women with FM. According to the results, we found that FM patients experienced a serious deterioration in sexual function compared to the control group. These findings support the hypothesis that fibromyalgia has a negative effect on sexual desire in women.

CONCLUSION

As a conclusion, FM is a disorder that has negative effects on sexual activity in women. When treating FM patients, a multidisciplinary approach should be taken and sexual function assessment should be made by predicting the negative effects of sexual dysfunction. Further studies should be conducted with wider populations to explain effects of the FM symptoms on sexuality and to treat the disorder.

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