

Comparison of Sexual Dysfunction in Women with Migraine and Multiple Sclerosis (MS)

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ABSTRACT

Migraine and multiple sclerosis (MS) are two neurologic disorders that influence different aspects of women who are affected. Sexual function is one of the co-morbidities that are not considered well in such cases. The goal of this study to evaluate sexual function in women experiencing either migraine or MS. Eighty six married migraineurs patients and 86 age- matched married MS cases were asked to fill out valid and reliable Beck depression inventory (BDI) and FSFI (Female Sexual Function Index) questionnaires. BDI score was higher in women with migraine than MS cases and BDI scores in both groups were high in cases with sexual dysfunction. BDI score was significantly correlated with total FSFI and its subscales in both groups. Multiple linear regression analysis between the FSFI as a dependent variable and age, BDI and education level as independent variables showed that age and BDI are independent predictors of FSFI in both groups.

Sexual dysfunction should be considered in women with either MS or migraine.

INTRODUCTION

One of the neurological problems which affect women more than men is migraine. Its prevalence reported to be near 10% and is characterized by recurrent severe headaches (1,2).

As it is a chronic disease, individuals who are affected would suffer from different co-morbidities which could influence different aspects of their lives.

One of the co-morbidities which is not considered as it should be, is sexual dysfunction in migraineurs.

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Most recently, Bestepe et al, by means of Arizona Sexual Experiences Scale, reported higher prevalence of sexual dysfunction in patients with headache (either migraine or tension headache) in comparison with healthy ones. They found that most aspects of sexual life are impaired in such cases (3).

Using Female Sexual Function Index (FSFI), Nappi et al investigated that women with migraine or tension-type headache suffer from dysfunction in all aspects of their sexual lives (4).

Another neurologic disorder which is more prevalent in women than men is multiple sclerosis which is associated with different psychological problems such as depression and sexual dysfunction (5). Some factors such as age, level of disability, depression and fatigue were considered as factors which influence sexual dysfunction in these cases (6).

As previous studies demonstrated, different aspects of sexual health is impaired in MS patients.

Loss of orgasm and libido, increased spasticity during sexual activity, and decreased vaginal lubrication is common in such cases (7-9).

As there is limited literature about sexual function in women with migraine and MS, we did this study to evaluate sexual function in women experiencing either migraine or MS. □

MATERIALS AND METHODS

In this cross-sectional study, 86 married migraineurs patients and 86 age- matched married MS cases who referred to headache or MS clinics of Sina Hospital (affiliated to Tehran University of Medical Sciences) were enrolled.

The inclusion criteria were definite migraine according to The International Classification of Headache Disorders (ICHD-2) criteria, definite MS due to McDonald criteria and participation in sexual intercourse at least once within 4 weeks prior to the study. The exclusion criteria were antidepressant treatment during last 4 weeks or active MS.

All cases were asked to fill the informed consent forms. The study had been approved by local ethics committee.

A structured questionnaire was used to collect data including age, level of education, severity of headache, type of MS and EDSS (Kurtzke Expanded Disability Status Scale).

Participants were asked to answer the valid and reliable Persian version of Beck depression inventory (BDI) and valid FSFI questionnaires.

FSFI is a 19-item self-report instrument to measure female sexual function providing scores on six domains of sexual function as well as a total score. These domains include: desire (2 items, questions 1&2), arousal (4 items, questions 3&4&5&6), lubrication (4 items, questions 7&8 &9&10), orgasm (3 items, questions 11&12&13), satisfaction (3 items, questions 14&15&16), and pain (3 items, questions 17&18&19). The addition of the nineteen items provides the total FSFI score (10). The cut off value of 26.55 considered for determining sexual dysfunction.

The BDI consists of 21 questions which are answered by the participants according to their feelings over the last week. Each item is scored from 0 to 3 to determine the participant's degree of depression. Individuals with total scores between 0 and 9 are not recognized as depressed, scores between 10 and 18 are indicative of mild to moderate depression, scores between 19 and 29 indicate moderate to severe depression, and scores between 30 and 63 are defined as severe depression (11).

All data were analyzed using SPSS software version 18.0 (SPSS Inc., Chicago, IL, USA).

Student's t test was used to compare continuous variables. Correlation coefficient (Pearson) calculated to assess association between variables. Multiple linear regression analyses with FSFI score as dependent variable and the scores of BDI, age and education level as independent variables conducted to assess their relevance for sexual function.

P value less than 0.05 was considered as significant. □

RESULTS

Eighty six patients with migraine and 86 MS cases enrolled.

Mean age and education level in migraine cases were 33.6 ± 8.4 and 13.3 ± 4.1 years while mean age and education level were 33.4 ± 6.5 and 12.9 ± 3.2 in MS patients (p value for education level was 0.5).

Mean headache severity was 7 ± 2 in migraine patients. Type of MS was RR (relapsing remitting) in 81 and SP (secondary progressive) in 5. Mean and median EDSS were 2 and 1.

Mean BDI score was significantly different between two groups (Table 1).

	Migraine	MS	P value
Total beck	15.5±9.2	18.7±10.3	0.03
Desire	3.3±1.1	3.5±1.1	0.23
Arousal	3.4±1.4	3.5±1.3	0.54
Lubrication	3.9±1.8	3.6±1.6	0.9
Orgasm	3.8±1.7	3.7±1.5	0.5
Satisfaction	3.8±1.5	4.1±1.3	0.3
Pain	4±1.8	3.8±1.8	0.3
Total sex score	22.5±8.2	22.6	0.9

TABLE 1. BDI, FSFI and its subscale scores in two groups.

	Migraine	MS
Total sexual	r=-0.37, p<0.001	r=-0.45, p<0.001
Desire	r=-0.36, p=0.001	r=-0.49, p<0.001
Arousal	r=-0.3, p=0.004	r=-0.49, p<0.001
Lubrication	r=-0.31, p0.004	r=-0.25, p=0.01
Orgasm	r=-0.3, p=0.005	r=-0.34, p=0.001
Satisfaction	r=-0.29, p=0.006	r=-0.5, p<0.001
Pain	r=-0.34, p=0.001	r=-0.39, p=0.004

TABLE 2. Correlation coefficients between BDI and total sexual score and its subscales in patients.

BDI score was significantly correlated with total FSFI and its subscales in both groups (Table 2).

By considering 26.55 as the cutoff point for FSFI questionnaire, 58 (67%) migraine cases and 58 (67%) MS patients considered as cases with sexual dysfunction (p=0.5).

BDI scores in cases with sexual dysfunction were significantly higher in both groups (Table 3).

Multiple linear regression analysis between the FSFI as a dependent variable and age, BDI and education level as independent variables showed that age and BDI are independent predictors of FSFI in both groups. Results are summarized in Table 4 and 5. □

DISCUSSION

This is the first study comparing sexual function in women with MS and migraine. We found that near two-thirds of MS cases and migraine ones suffer from sexual dysfunction. We also found that BDI score was higher in women with migraine than MS cases and BDI scores in both groups with sexual dysfunction were higher.

In a previous study conducted by Nappi et al, they found that near 90% of patients with primary headache suffer from sexual dysfunction and the pain domain was the most affected domain of the sexual activity (4). By means of Arizona Sexual Experiences Scale, Bestepe et al reported that patients with headache (either migraine or tension headache) suffer from difficulties in different aspects of their sexual lives (3).

Different factors have been considered for association between sexual dysfunction and chronic pain such as headache. Chronic pain have effects on sexual desire, genital arousal and orgasm (4,12). According to psychological problems such as depression, sexual dysfunction is prevalent in migraineus women (4).

	Cases with FSFI <26.55	Cases with FSFI >26.55	P value
Migraine	17.7±8.6	11.7±9.2	0.005
MS	21.7±10.1	12.5±7.9	<0.001

TABLE 3. Mean BDI scores in patients with and without sexual dysfunction.

	B	SE	95% CI	P value
BDI	-0.32	0.08	(-0.44,-0.1)	0.002
Age	-0.44	0.09	(-0.56, -0.19)	<0.001
Educational level	-0.09	0.2	(-0.57,0.23)	0.4

TABLE 4. Linear regression model for variables predicting FSIS in patients with migraine.

	B	SE	95% CI	P value
BDI	-0.45	0.08	(-0.49, -0.17)	<0.001
Age	-0.22	0.1	(-0.41, -0.002)	0.04
Educational level	-0.11	0.2	(-0.81, 0.27)	0.32

TABLE 5. Linear regression model for variables predicting FSIS in patients with MS.

Depression is a common co-morbidity of migraine as has been reported in near 30% of affected cases (13,14).

As the results of current study show, mean BDI was significantly higher in patients with FSFI score less than 26.55 and BDI score was an independent variable predicting FSFI. BDI score was significantly negatively correlated with all domains of sexual health.

We also investigated that two thirds of MS cases in this study suffer from sexual dysfunction and patients with higher FSFI score had lower mean BDI score.

In a previous research, Lombardi et al. reported sexual dysfunction in 57% of MS women (13) and other studies demonstrated that women with MS suffer from loss of orgasm and libido, increase spasticity during sexual activity and decreased vaginal lubrication during sexual activity (7-9).

Factors such as sensory dysfunction, psychological problems, side effects of medica-

tions, and disease complications like urinary and bowel symptoms have been reported as factors responsible for sexual dysfunction in MS cases (7,9,15).

Mood disorders such as depression should be regarded as leading cause of sexual dysfunction in MS women. Depression is the most common mood disorder in MS cases which is related with different problems in MS cases such as fatigue and impaired sleep quality (1).

As our results show, depression is an independent predictor of FSFI score and total FSFI score and its domains were negatively correlated with BDI scores. □

CONCLUSION

Sexual dysfunction should be considered in women with either MS or migraine.

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