



Abstract

Evaluation of Sexual Dysfunction in Female Patients with Tension-Type Headache

Faruk Ömer Odabaş

Objective: Evaluation of sexual disfunction in female with tension type headache patients.

Methods: In total, 90 female patients with tension type-headache were included in the patient group; furthermore, there were 90 healthy controls (control group). Sexual functions of patients were evaluated using the female sexual function index (FSFI) and their depression levels were measured using by Beck Depression Index (BDI). The controls were also evaluated using the FSFI and BDI. The patient and control groups appealed to evaluate the importance of sexual activities with a decimal analog scale.

Results: The total FSFI's were more decreased when compared with control group in all subgroups. BDI's were significantly higher in the patient group than in the control group. Further, in the patient group, the decimal analog scale values analyzing the importance of sexual activities was significantly lower.

Conclusion: Tension type headache is closely associated with depressive predisposition in patients and it markedly influence sexual activities negatively.

Keywords: Tension type headache, sexual disfunction, depression

Introduction

Sex and sexual problems are seen as taboo and they are not sufficiently handled in many communities. It has been displayed in a limited number of studies that primary headaches like chronic pains are also substantially related with sexual dysfunction. It is considered that particularly tension headache (THA) and sexual dysfunction are in correlation with each other to a great extent. Likewise, many psychiatric disorders, notably depression accompany THA and this comorbidity further increases sexual dysfunction.

In this study, it was aimed to investigate the importance given to sex, the tendency of depression that accompanies it, and in what level they affect sexual functions in female patients with THA.

Method

Ninety female patients followed with THA diagnosis were included in the study. Ninety healthy women without any chronic disease history were included in the control group. In order to conduct the study, ethics committee approval was taken from Selçuk University. The patients who accepted to participate to the study were informed and their signed consents were taken.

1. All of the patients included in the study carried the clinical features of THA and were followed by us:
2. The patients having systemic diseases at the level that may affect their daily life quality
3. The patients having major psychiatric disease history

The patients who could not cooperate with the tests were not included in the study.

Medical histories of the participants were recorded and physical examinations were performed. Age, body mass index, marriage duration, number of pregnancies, family type, education level, monthly income, and economic statuses of the patients with THA and the control group were evaluated. Furthermore, the number of sexual intercourses per week, the importance of sexual life, and female sexual function index (FSFI) and Beck depression index (BDI) values of both groups were studied.

Department of Neurology, University of Health Sciences, Konya Training and Research Hospital, Konya, Türkiye

Address for Correspondence:
Faruk Ömer Odabaş
E-mail: fodabas2002@yahoo.com

Received: 23.05.2016

Accepted: 25.03.2017

© Copyright 2017 by Available online at
www.istanbulmedicaljournal.org

FSFI consists of six subgroups such as desire, sexual arousal, lubrication, orgasm, satisfaction, and pain. Frequency and level of sexual desire and interest were handled and evaluated in the first and second questions (score interval, 1-5); arousal frequency, level, sureness, and satisfaction in the third to sixth questions (score interval, 0-5); lubrication frequency, difficulty and frequency, and difficulty of maintaining it in sexual intercourse in seventh to tenth questions (score interval, 0-5); frequency, difficulty, and satisfaction of orgasm in 11th to 13th questions (score interval, 0-5); satisfaction, the ratio of closeness to the partner, and the level of satisfaction in sexual intercourse and the whole sexual life in 14th to 16th questions (score interval, 0-5); and pain and disturbance, existence of pain during entrance to the vagina, and pain level following entrance to the vagina in 17th to 19th questions (score interval, 0-5).

Accordingly, the highest raw score that can be taken from the scale is 95 and the lowest raw score is 4. Simple mathematical algorithm calculation was designed to determine the composite full scale scoring of sub-dimensions, and factor loading was found as 0.6 for desire, 0.3 for arousal and lubrication, and 0.4 for orgasm, satisfaction, and pain. After multiplying sub-dimension means with the factor loadings, the highest score that can be taken was calculated as 36 and the lowest score as 2 (1).

BDI is a valid and reliable method to measure the depressive symptoms in the society. It consists of 21 items related with depressive symptoms, such as pessimism, the feeling of failure, dissatisfaction, guilt feelings, uneasiness, fatigue, diminishing appetite, indecision, sleep disorder, social withdrawal, etc. BDI is recommended for depression screening, as it is both short and not mixed with neurological symptoms. Each item is scored between 0 and 3. Total score varies between 0 and 63. In our study, $BDI \geq 17$ was assessed in favor of depression. Validity and reliability study was conducted in Turkish by Hisli (2). It was reported that a BDI score of 17 and over reflected depression. While it was accepted that there was no depression in cases having scores between 0 and 10, those who took scores between 11 and 17 were associated with mild depression, scores between 18 and 23 with medium, and scores between 24 and 29 with the presence of severe depression.

Statistical Analysis

Statistical analysis was conducted using the analysis program SPSS 21.0 package software (Statistical Package for the Social Sciences Inc.; Armonk, NY, USA). The data were summarized as mean \pm standard deviation. Parametric data of the patients were compared with Student t test and non-parametric data with χ^2 analysis. In the patient groups, the relationship between their FSFI, BDI, age, body mass index, marriage duration, number of pregnancies, family type, education level, employment status, monthly income, and economic conditions were evaluated with Spearman's correlation analysis. In the correlation coefficients, a score between 0 and 0.25 was evaluated as no correlation, a score between 0.25 and 0.50 as weak-to-medium correlation, a score between 0.50 and 0.75 as significant correlation, and a score between 0.75 and 1.00 as very significant correlation.

Results

The mean age of patients who took part in the study was determined as 38.74 ± 9.10 years. The duration of headache in patients was found as 5.69 ± 5.83 years. Patient and control group displayed similar demographic characteristics.

The demographic data of patient and control group are shown in Table 1.

When the patient and control groups were compared with respect to the number of sexual intercourses per week, the frequency of intercourse was found to be significantly low compared to the control group ($p < 0.001$). The comparison of frequency of sexual intercourse is shown in Table 2.

When the patient and control groups were compared with regard to FSFI scores, total FSFI and subgroup FSFI values (sexual desire or frequency of interest, arousal, lubrication, orgasm, sensation, pain) obtained were significantly low compared to the control group ($p < 0.001$). The comparison of FSFI of patient and control groups is shown in Table 3.

When the patient and control groups were compared in terms of depression tendency, BDI values in patient group were found to be

Table 1. Demographic features of patient and control group

		Tension headache (n=90)	Control (n=90)	p
Age		38.74 ± 9.10	38.67 ± 8.79	0.954
BMI		28.34 ± 5.81	28.93 ± 6.15	0.512
Duration of marriage		18.78 ± 9.68	18.42 ± 8.89	0.798
Number of pregnancy		3.44 ± 1.97	3.20 ± 1.47	0.348
The number of alive children		2.76 ± 1.34	2.68 ± 1.27	0.690
Monthly income (\$)		543 ± 250	555 ± 163	0.312
Family type	Nuclear/Extended	%74.4 (67) / %25.6 (23)	%66.7 (60) / %33.3 (30)	0.327
Education	Illiterate/Primary /High school/University	%5.6 (5) / %74.4 (67) / %13.3 (12) / %6.7 (6)	%7.8 (7) / %81.1 (73) / %5.6 (5) / %5.6 (5)	0.301
Employment status	Working/Housewife	%7.8 (7) / %92.7 (83)	%6.7 (6) / %93.3 (84)	0.773
Economic status	ILTE/IEE/IMTE	%50 (45) / %50 (45) / %0 (0)	%36.7 (33) / %63.3 (57) / %0 (0)	0.980

BMI: body mass index; ILTE: Income less than expenses; IEE: income equals expenses; IMTE: income more than expenses

Table 2. Comparison of the number of sexual intercourse of patient and control groups per week

		Tension Headache	Control	p
Number of sexual intercourse per week	<1	%41.1 (37)	%7.8 (7)	<0.001
	1-2	%42.2 (38)	%52.2 (47)	
	3-4	%13.3 (12)	%32.2 (29)	
	>5	%3.3 (3)	%7.8 (7)	

Table 3. Comparison of FSFI scores of patient and control groups

	Tension Headache	Control	p
FSFI total	18.32±4.36	28.47±5.92	<0.001
FSFI desire	3.43±0.60	4.18±1.18	<0.001
FSFI arousal	2.73±1.10	4.45±1.08	<0.001
FSFI lubrication	3.21±1.21	5.02±1.23	<0.001
FSFI orgasm	2.98±1.24	4.84±1.18	<0.001
FSFI satisfaction	3.12±1.05	4.82±1.32	<0.001
FSFI pain	2.83±1.53	5.15±1.11	<0.001
FSFI: female sexual function index			

Table 4. Comparison of patient and control groups with regard to BDI and the importance given to the sexual life

BDI	17.86±8.18	8.97±5.77	<0.001
Importance of sexual life	5.92±1.97	7.24±2.35	<0.001
BDI: Beck depression index			

significantly high compared to the control group ($p<0.001$). Meanwhile, in comparison of the question “How important is sexual life for you?” which was evaluated with analog scale over 10 points, it was found that sexual life was considered less important in patient group ($p<0.001$). The values of BDI and the importance of sexual life are shown in Table 4.

Discussion

THA is the most frequently seen type of headache. It is also among the headache types that has high socioeconomic impacts (3). Life-long prevalence of THA has been reported to be between 34.8% and 78%. While this rate is between 37.1% and 88% in female, it has been found to be between 32.3% and 69% (4). The studies have demonstrated that some psychiatric diseases, notably depression accompany primary headaches (5). Depressive disorder was reported in 68.3% of patients with THA, anxiety disorder in 19.3% of them, panic disorder in 5.5% of them, and obsessive compulsive disorder in 1.1% of them (6).

Sexuality and sexual functions are issues that are seen as taboo and people including health professionals hesitate to bring forward. This issue affects 43% of females and 31% of males (7, 8). If the sexuality of a woman has deteriorated, this generally ends up with divorce and rupture of family ties (9). It is well-known that there is a high rate of comorbidity between THA and primary

headaches associated with sexual intercourse (10). Although there are few studies conducted on sexual dysfunctions in our country, there has been an increase of studies in this issue in the recent years. The most frequently seen sexual dysfunctions in women are diminishing sexual interest, arousal disorders, orgasmic disorders, dyspareunia, vaginismus, and sexual anxiety disorder (11). Female sexual dysfunction is a multidisciplinary field that is affected by biological, psychological, medical, and many other factors (12). Studies indicate that female sexual dysfunction (FSD) is multifactorial and also genetic susceptibility plays a role in it (13).

It is known that chronic pains cause sexual dysfunction. Ambler et al. (14) in their studies reported that chronic pain affects sexual desire and activity negatively. It was indicated in our study in analog scale evaluation in which we questioned the importance of sexual life that the importance given to sexuality in the patients with THA was lower than the control group, and on the other hand, it was found in the comparison made with regard to the number of intercourse per week that the finding of the frequency of intercourse being significantly low compared to the control group supports the literature.

Headaches often increase in the productive years of the youth and highly affect social activity and work life like diseases leading to chronic pain (15). It has been discussed in the studies conducted in the recent years that chronic pain has a significant effect on female sexual function. Chronic pain leads to low sexual success and causes sexual dysfunction in varying degrees (16, 17). Studies demonstrate that THA has a closer relationship with sexual dysfunction compared to migraine (18). The thought that headache would increase or would be triggered during sexual activity may affect the sexual performance of the patient negatively. In our study, it was detected that FSFI total and subgroup scores used as indicators of sexual function were significantly low, and it was observed that sexual dysfunction was seen remarkably more. Depression and other psychiatric diseases that are known to cause sexual dysfunction may further increase these negative effects of migraine and THA (5, 18). Furthermore, in our study, depression levels of women with THA were found to be significantly high compared to the control group.

There was not sufficient correlation detected between the frequency and intensity of headaches and sexuality in the studies seeking an answer to the question “does frequency and intensity of headaches influence sexuality?” Maizels and Burchette (19) suggested that the frequency of sexual problems in migraine patients did not vary with migraine attack frequency. Similarly, Bestepe et al. (20) in their study did not detect a correlation between sexuality and intensity, frequency and duration of headache. In our study, we did not investigate whether intensity, frequency, and duration of headache were correlated with sexual dysfunction. This may be accepted as a deficiency of our study.

There are a few studies evaluating the effects of primary headaches that are believed to influence sexual activity and be seen more often in almost all societies on sexual activity (20). The aim of this study was to investigate the frequency of sexual dysfunction in patients having frequent THA. This study indicates that when compared with the control group, sexualities of female patients THA are affected negatively and their tendency of depression increases. Further studies are needed to increase our knowledge about headaches and sexual dysfunction.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of University of Selçuk.

Informed Consent: Written informed consent was obtained from patients who participated in this study.

Peer-review: Externally peer-reviewed.

Conflict of Interest: No conflict of interest was declared by the author.

Financial Disclosure: The author declared that this study has received no financial support.

References

1. Rosen R, Brown C, Heiman J. The female sexual function index (FSFI) : A multidimensional self-report instrument for the assessment of female sexual function. *J Sex Marital Ther* 2000; 26: 191-208. [\[CrossRef\]](#)
2. Hisli N. A study on the validity of Beck depression inventory. *Psikoloji Dergisi* 1988; 22: 118-26.
3. Headache Classification Subcommittee of the International Headache Society. The International Classification of Headache Disorders: 2nd edition. *Cephalalgia* 2004; 24 (Suppl 1): S9-160.
4. Scher AI, Steward WF, Lipton RB. Migraine and headache: a meta-analytic approach. In: Crombie IK, ed. *Epidemiology of Pain*. Seattle, Washington: IASP Press; 1999. p.159-70.
5. Huang CY, Keller JJ, Sheu JJ, Lin HC. Migraine and erectile dysfunction: Evidence from a population-based case-control study. *Cephalalgia* 2012; 32: 366-72. [\[CrossRef\]](#)
6. Coskun O. Gerilim tipi baş ağrısı ve tedavisi. *Türkiye Klinikleri J Neurol-Special Topics* 2008; 1: 22-6.
7. Güvel S. Kadın cinsel fonksiyon bozuklukları epidemiyolojisi. *Avicena Dergisi* 2002; 1: 36-8.
8. Rosen RC. Prevalence and risk factors of sexual dysfunction in men and women. *Curr Psychiatry Rep* 2000; 2: 189-95. [\[CrossRef\]](#)
9. Kadri N, Mchichi Alami KH, Mchakra Tahiri S. Women sexual dysfunction: a population-based epidemiological study. *Arch Women Ment Health* 2002; 5: 59-63. [\[CrossRef\]](#)
10. Frese A, Eikermann A, Frese K, Schwaag S, Husstedt IW, Evers S. Headache associated with sexual activity: demography, clinical features, and comorbidity. *Neurology* 2003; 61: 796-800. [\[CrossRef\]](#)
11. Hikmet Y, Levend Ö, Abdulkadir T. Kadınlarda cinsel fonksiyon bozukluklarına güncel yaklaşım. *Klinik ve deneysel araştırmalar dergisi* 2010; 1: 235-40.
12. Leiblum S. What every urologist should know about female sexual dysfunction. *Int J Impot Res* 1999; 11: 39-40. [\[CrossRef\]](#)
13. Clayton AH, Groth J. Etiology of female sexual dysfunction. *Womens Health (Lond Engl)* 2013; 9: 135-7. [\[CrossRef\]](#)
14. Ambler N, Williams AC, Hill P, Gunary R, Cratchley G. Sexual difficulties of chronic pain patients. *Clin J Pain* 2001; 17: 138-45. [\[CrossRef\]](#)
15. Rasmussen BK. Epidemiology of headache. *Cephalalgia* 2001; 21: 774-7. [\[CrossRef\]](#)
16. Kwan KS, Roberts LJ, Swalm DM. Sexual dysfunction and chronic pain: the role of psychological variables and impact on quality of life. *Eur J Pain* 2005; 9: 643-52. [\[CrossRef\]](#)
17. Basson R. Sexual function of women with chronic illness and cancer. *Womens Health (Lond Engl)* 2010; 6: 407-29. [\[CrossRef\]](#)
18. Beghi E, Bussone G, D'Amico D, Cortelli P, Cevoli S, Manzoni GC, et al. Headache, anxiety and depressive disorders: the HADAS study. *J Headache Pain* 2010; 11: 141-50. [\[CrossRef\]](#)
19. Maizels M, Burchette R. Somatic symptoms in headache patients: the influence of headache diagnosis, frequency, and comorbidity. *Headache* 2004; 44: 983-93. [\[CrossRef\]](#)
20. Bestepe E, Cabalar M, Kucukgoncu S, Calikusu C, Ornek F, Yayla V, et al. Sexual dysfunction in women with migraine versus tension-type headaches: a comparative study. *Int J Impot Res* 2011; 23: 122-7. [\[CrossRef\]](#)