

CERRAHİ MENOPOZLU HASTALARIN DEPRESYON ANKSİYETE VE UYKU KALİTESİ SIKLIĞI AÇISINDAN ARAŞTIRILMASI

Anxiety, Depression and Sleep Quality in Patients with Surgically Induces Menopause

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ÖZET

Amaç: Menopoz değişik organ ve sistemleri etkileyen fizyolojik bir yaşam dönemidir. Bundan dolayı menopoz sonrası dönemde pek çok bulgu ve semptom görülebilir. Psikiyatrik bazı değişiklikler de buna dahil edilebilir. Bu çalışmanın amacı transabdominal histerektomi ve bilateral salpingooferektomi (TAH+BSO) olan cerrahi menopozlu hastalarda anksiyete, depresyon ve uyku kalitesinin araştırılarak, bulguların menopozda olmayan sağlıklı kadınlarla karşılaştırılmasıdır.

Gereç ve Yöntemler: Bu çalışmada iki grup bulunmaktadır. Çalışma grubunu benign nedenlerle TAH + BSO olan 22 hasta, kontrol grubumuzu ise reproduktif çağda bulunan ve düzenli adet gören 25 sağlıklı gönüllüden oluşturmuştur. Görüşme sırasında gönüllülere Beck anksiyete, Beck depresyon ve Pittsburgh uyku kalitesi ölçeği uygulanmıştır.

Bulgular: Cerrahi menopozlu hastalarda Beck anksiyete ve Beck depresyon ölçeklerine ait skorlar değerlendirilmiş ve cerrahi menopozlu olan hastalarda istatistiksel olarak anlamlı biçimde skorlar yüksek bulunmuştur ($p<0.001$). Cerrahi menopozu olan 22 hastanın 17'sinde (% 77,3) vasomotor semptomlara rastlanmıştır ($p<0.001$). Cerrahi menopozu olan hastalarda sağlıklı gönüllülere göre istatistiksel olarak anlamlı biçimde uyku kalitesinin bozulduğu saptanmıştır ($p<0.001$).

Sonuç: Cerrahi menopoza giren hastalarda özellikle ilk altı haftalık süreçte yakın moniterizasyon uygulanmasının koruyucu mental sağlık için önemli olacağı düşüncesindeyiz.

Anahtar kelimeler: Menopoz; Depresyon; Anksiyete; Uyku

ABSTRACT

Objective: Menopause is a physiological life period that potentially affects various organs and systems. Therefore wide spectrum of signs and symptoms may be observed in postmenopausal period. Menopause also associated with psychiatric changes. The aim of present study was to evaluate the depression, anxiety and sleep quality in women who underwent TAH+BSO (Transabdominal hysterectomy+ bilateral salpingooferectomy or surgically induced menopause) and to compare these findings in healthy non-menopausal controls with similar demographic characteristics.

Materials and Methods: The study was carried out with two groups. 22 women who underwent TAH+BSO for benign conditions constituted our study group and 25 healthy women with regular menstrual cycles at the reproductive age constituted our healthy control group. Beck anxiety scores, Beck depression scores and Pittsburgh sleep quality index score were administered to patients during the interview.

Results: Beck anxiety scores, Beck depression scores were higher in surgically induced menopause group ($p<0.001$). Seventeen of 22 patients (% 77.3) in surgical menopause group had vasomotor symptoms ($p<0.001$). Furthermore Pittsburgh sleep quality index score were significantly high in surgically induced menopause group ($p<0.001$).

Conclusion: Closely monitoring of surgical menopausal women especially in the first six weeks into menopause is very useful for preventive mental health.

Key words: Menopause; Depression; Anxiety; Sleep

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INTRODUCTION

Menopause is defined retrospectively as the time of permanent cessation of menstruation due to loss of ovarian function (1). Menopause is a medical term indicating the absence of menstrual bleeding for more than one year (2). The major endocrine variation is the decrease of sex steroid hormone secretion as a result of cessation of ovarian follicular activity (3-4). Therefore wide spectrum of signs and symptoms may clinically observed in postmenopausal period (5-7). Increases in the incidence of psychiatric pathologies such as anxiety, depression, mood disorders and irritability have been observed during the postmenopausal period (6-8). The presence of depression in postmenopausal period adversely affects the menopausal symptoms. Psychiatric changes in menopause are not only associated with physiological factors, but also individual, cultural and social factors significantly affect these psychiatric changes in menopause (7-9).

Population studies have consistently shown depression to be about twice as common in women as in men. Moreover the frequency of depression is increasing especially during the menopausal transition period (5-6). Studies investigating the association between menopause and depressive mood have conflicting results. Although Weissmann et al. (7), Anderson et al. (8), and Hunter et al. (9) reported an association between menopause and depression, Hallstrom, Samuilsson (10) and McKinlay et al. (11) suggested that there was not an association between menopause and depression. Some authors suggest that due to rapid increase in follicle-stimulating hormone (FSH), and luteinizing hormone (LH) the relationship between menopause and depression is limited to menopausal transition period. Vasomotor symptoms (VSM) and sleep disturbances are the main determinants of the depression in menopause (12-14).

Freeman et al. reported that depression in menopause was especially associated with hormonal fluctuations. They also suggested that VSM and sleep disorders were two independent variables (15).

Estrogen deficiency in menopause leads to changes in behavior and mood. In postmenopausal women, total amount of tryptophan is not changed, but free amount of tryptophan significantly decreases. Tryptophan is an essential substance for the serotonin metabolism. Therefore, decreasing serotonin in brain tissue can lead to depression (16). The present study was conducted 42-45 days after surgical menopause when the peak period of FSH and LH. Menopause is a process and intensity of symptoms decreases over time. Therefore, contrary to the other studies in the literature this current study was conducted when the most severe symptoms present.

The aim of present study was to evaluate the depression, anxiety and sleep quality in women who underwent Transabdominal hysterectomy+bilateral salpingooferection or surgically induced menopause (TAH+BSO) and to compare these findings in healthy non-menopausal controls with similar demographic characteristics. Another aim of our study was to investigate the relationship between psychiatric symptoms and VSM symptoms and sleep quality.

MATERIALS AND METHODS

The study was approved by the institutional ethics committee and all participants signed an informed consent form regarding to participate in the present study. This prospective study was performed at Kayseri Education and Research Hospital of Medicine, a tertiary referral centre in Turkey between December 2012 and July 2013. A total of 22 surgically induced menopausal women and 25 healthy women at the reproductive age admitted to our department were investigated. The study was carried out with two groups. 22 women who underwent TAH+BSO for benign conditions (treatment-resistance endometrial hyperplasia, myoma uteri, medical treatment-resistance abnormal uterine bleeding, etc.) constituted our study group and 25 healthy women with regular menstrual cycles at the reproductive age constituted our healthy control group.

None of the women in the control group were pregnant. Women who reported histories of any medical and psychiatric problems were excluded from the study. Women who were taking any medication (including antidepressant, anti-psychotic or hormone replacement therapy) or having other systemic diseases were not included in the study. Preoperative psychiatric interviews were conducted with women in study group before TAH+BSO operation. Beck anxiety scores, Beck depression scores and Pittsburgh sleep quality index score were administered to patients during the interview. Women who identified any psychiatric problems such as depression, anxiety, bipolar disorder and psychotic disorder during this psychiatric interview were excluded from the study. All the participants were invited to undergo a follow-up psychiatric interview 6 weeks after TAH+BSO operation. Structured Clinical Interview Form for DSM IV Axis Disorders (SCID-I), Beck anxiety scores, Beck depression scores and Pittsburgh sleep quality index score were used to evaluate the depression, anxiety and sleep quality. The reason for a 6-week time period of follow-up psychiatric interview was the synchronization with peak hormonal fluctuations. FSH and LH levels peak after 6 weeks of TAH+BSO operation. Therefore, the effect of hormonal fluctuations on depression and anxiety is better assessed.

Scales for women in control group were conducted immediately after the menstruation. Regular menstruation was the main point to be included in the study. Women with irregular menstrual cycles were not included into the control group.

The Beck Anxiety Inventory (BAI): The Beck Anxiety Inventory is a well accepted self-report measure of anxiety in adults and adolescents for use in both clinical and research settings. BAI, created by Aaron T. Beck, is a 21-item multiple-choice self-report inventory that measures the severity of anxiety with a 0-3 scoring system. Higher total scores indicate more severe anxiety and depressive symptoms. Turkish validity and reliability studies were conducted (17).

The Beck Depression Inventory (BDI): BDI, created by Dr. Aaron T. Beck, is a 21-question multiple-choice self-report inventory, one of the most widely used instruments for measuring the severity of depression (18). BDI was designed for the measurement of severity of depression, monitoring the treatment response and disease identification. Depression-specific behaviors and symptoms are clarified with a number of question and each question corresponds to a number between 0 and 3. Patients are asked to mark the statement that best describe the current status of their emotion. Each answer is scored on a scale value of 0 to 3 and the result is obtained by the sum of all BDI item scores. Patients are asked to mark the statement that best describe the current and last one-week status of their emotion (18). The test is scored differently for the general population and for individuals who have been clinically diagnosed with depression. For the general population, a score of 21 or over represents depression. For people who have been clinically diagnosed, scores from 0 to 9 represent minimal depressive symptoms, scores of 10 to 16 indicate mild depression, scores of 17 to 29 indicate moderate depression, and scores of 30 to 63 indicate severe depression (18). Questionnaire takes approximately 15 minutes to fill. However, this period may vary depending on the patient's level of education. Turkish validity and reliability studies were conducted (18).

Correlation between BDI and other depression scales is very high. The correlation between the clinical measurement of depression and BDI is ranged from 0.55-0.96 (mean=0.72) in psychiatric patients. The correlation is ranged from 0.55-0.73 (mean= 0.60) in non-psychiatric patients. The average correlation between BDI and HAM-D was found to be 0.7318. The advantages of BDI are having a simple language, an easy scoring system and a facility of self report. The possibility of high scoring in women, elders, adolescents, low educational level and the presence of psychiatric illness is the disadvantage of the BDI (18).

Pittsburgh Sleep Quality Index (PSQI): PSQI, created by Buysse in 1989, is a 19-question self-rated questionnaire which assesses sleep quality and disturbances over a 1-month time interval. Turkish validity and reliability study was conducted by Agargün and colleagues in 1996. Every item of test is scored on a scale value of 0 to 3. Scale consists of seven subscales assessing sleep quality, sleep latency, sleep duration, sleep efficiency, and sleep disorders, use of sleep medication and loss of functionality during the day. Total PSQI score ranging from 0-21 is obtained by sum of all subscales item scores. Total PSQI score, greater than 5 indicate inadequate sleep quality with a sensitivity of %89.6 and specificity of %86.5 (19-20).

Statistical Analysis

Shapiro-Wilk's test was used, histogram and q-q plots were assessed to test the data normality. Levene test was used to assess the variance homogeneity. Chi-square analysis were used to compare the differences between categorical variables, independent samples t test and Mann-Whitney U tests were used for continuous variables. Values are expressed as frequencies and percentages, mean and standard deviation or median and 25th-75th percentiles. Analyses were conducted using R 3.0.0. A p value less than 0.05 was considered as statistically significant.

RESULTS

A total of 47 women were included in our study; Of these 47 women, 25 (%56.0) were non-menopausal women and 22 (%44.0) were surgical menopausal women. The mean age was 44.68 ± 3.59 in non-menopausal control group and 46.32 ± 5.30 was in surgical menopausal study group. The characteristics of the women are shown in Table 1. There were no statistically significant differences between groups for age, marriage status (single, married, divorced), education level (primary school, secondary school, university), profession, income level, height, weight and BMI.

In other words, due to social stressors are similar for both groups, comparisons were made between the two groups is completely homogeneous. Evaluation of surgical menopause and control groups for age, marriage status (single, married, divorced), education level (primary school, secondary school, university), profession, income level, height, weight and BMI is expressed in Table 1.

Table 2 included evaluation of Beck anxiety scores, Beck depression scores, Pittsburgh sleep quality index score and vasomotor symptoms of menopause and control groups. When the results were investigated, Beck anxiety scores, Beck depression scores were higher in surgically induced menopause group ($p < 0.001$). Seventeen of 22 patients (% 77.3) in surgical menopause group had vasomotor symptoms ($p < 0.001$). Furthermore Pittsburgh sleep quality index score were significantly high in surgically induced menopause group ($p < 0.001$). Significant difference was found between the groups regarding VMS, BDI, BAI and PSQI score parameters.

DISCUSSION

In the current investigation we evaluated the symptoms of anxiety and depression in women who underwent TAH+BSO for benign conditions six weeks after the operation and compared these findings in healthy non-menopausal controls. We also investigated the relationship between symptoms of anxiety and depression and sleep disturbance. No significant difference was found between the surgical menopausal study and healthy control groups regarding the age, marriage status, education level, profession, income level, and BMI. Therefore, our study was conducted in a homogenous environment and the only different variable between the study and control groups was the menopausal status. In our study, depression and anxiety in surgical menopausal women was found significantly higher than the healthy non-menopausal controls.

Table 1. Demographic findings of patients with surgical menopause and control group

Variable	Control (n=25)	Surgery (n=22)	p
Age	44.68±3.59	46.32±5.30	0.217
Marriage status			
Single	2(8.0)	1(4.5)	0.348
Married	21(84.0)	16(72.7)	
Divorced	2(8.0)	5(22.7)	
Education level			
Primary school	9(36.0)	12(54.5)	0.209
Secondary school	4(16.0)	4(18.2)	
High school	8(32.0)	6(27.3)	
University and advanced	4(16.0)	0(0.0)	
Profession			
House wife	14(56.0)	16(72.7)	0.234
Working	11(44.0)	6(27.3)	
Income level			
<1000 TL	7(28.0)	10(45.5)	0.088
1000-3000 TL	11(44.0)	11(50.0)	
>3000 TL	7(28.0)	1(4.5)	
Height (cm)	163.60±5.08	161.05±5.82	0.115
Weight (kg)	74.72±12.96	75.41±11.62	0.850
BMI (kg/m ²)	28.02±4.94	29.53±5.61	0.334

Values are expressed as n(%) or mean±SD.

Table 2. Evaluation of Beck anxiety scores, Beck depression scores, Pittsburgh sleep quality index score and vasomotor symptoms of menopause and control groups.

Variable	Control (n=25)	Surgery (n=22)	p
VMS			
Absent	25(100.0)	5(22.7)	<0.001
Present	0(0.0)	17(77.3)	
BDI	9.0(7.0-12.0)	20.5(15.0-25.0)	<0.001
BAI	10.0 (7.0-12.0)	19.0 (18.0-26.0)	<0.001
PSQI	2.0 (1.0-3.0)	9.0 (6.0-14.0)	<0.001

Values are expressed as n(%) or median(25th-75th percentiles).

Since the very earliest times, it has been discussed that menopause is a period-specific psychiatric syndrome or not. In 1906, clinical depression named "Involutional Melancholy" was defined for this specific menopausal period by Kraepelin. In this clinical condition defined by Kraepelin, agitation, hypochondria, and micromanic delusions were evident but after Kraepelin stated that it was an extension of mood disorders (7).

Today, a syndrome unique to menopause is not defined but in many studies related to menopause, depression, anxiety, irritability, fatigue, insomnia, amnesia and loss of libido findings are common for this special period (21-24). But also there are some investigations which show that depression and anxiety are not effecting to women in menopause (25-26).

Disability in postmenopausal women, depression, mental illness, chronic physical illness due to drug use, to be entered menopause before the age of 40 and has not received any counseling determined to be associated with being (27). In some studies the psychological symptoms experienced during menopause, the country's economic situation, unemployment and uncertainty, challenging life events, relationships with family issues highlighted, middle-aged women should not be ignored when evaluating proposed psychosocial stressors. The reason for the different results reported in these studies appears to be associated with mainly different study design. The time spent in menopausal period, severity of symptoms, presence of vasomotor symptoms and the relationship with sleep disturbance associated with menopause have been ignored in the literature studies. This study was conducted after surgical menopause (between days 42-45) and carried out during the peak of FSH and LH hormones. Menopause is a process known alleviated symptoms in time. Therefore, this study is the most violent period of the findings from the literature reflects unlike menopause. Significant difference was found between the healthy non-menopausal age-matched control group and surgical menopausal study group regarding depression and

anxiety symptoms. In surgical menopausal women, there is evidence of increased risk of depression due to loss of physical health and the loss of function in an unexpected time (28). However, some authors advocate that the presence of mental health problems in the preoperative period is the main predictor for the mental disorders that occurs after surgical menopause (29).

This study contains homogenous groups for age, marriage status (single, married, divorced), education level (primary school, secondary school, university), profession, income level, height, weight and BMI. Therefore evaluation of Beck anxiety scores, Beck depression scores, Pittsburgh sleep quality index score and vasomotor symptoms were done in homogeneous groups. There were no statistical difference for other stressors and these results directly reflect differences between menopause and not menopause.

According to the results obtained in this study, closely monitoring of surgical menopausal women especially in the first six weeks into menopause is very useful for preventive mental health. On the other hand, some studies have revealed that hormonal fluctuations occurred especially in the first 45 days. Regular inspections and investigations on the general physical health and education programs, as well as information related to menopause, women's support groups in this new period of life can prepare both physically and mentally better.

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