Body Image, Self-Esteem and Depressive Symptomatology in Women with Polycystic Ovary Syndrome

Polikistik Over Sendromu Olan Kadınlarda Beden Algısı, Benlik Saygısı ve Depresif Belirtiler

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ABSTRACT

Introduction: In the current study we aimed to determine body image, self-esteem and depressive symptomatology in women with Polycystic ovary syndrome (PCOS) and compare with healthy controls.

Method: This study was conducted among the patients with untreated PCOS who admitted to the Outpatient Clinic of Gynecology and Obstetrics of Faculty of Medicine of Selçuk University. A total 83 consecutive women with PCOS met the criteria of present study were included in the study. Age matched healthy controls (n=64) were recruited from employees at Selçuk University Hospital. PCOS was defined according to Rotterdam criteria. After socio-demographic characteristics of the participants were recorded, Body Image Scale, Rosenberg Self-Esteem Scale and Beck Depression Inventory were completed by the participants.

Results: Patients with PCOS and healthy controls did not differ in some socio-demographic variables, including age, education and economic status ($p>.05$). Previous psychiatric history was more prevalent among the PCOS group ($p<.05$). Body mass index (BMI) was ≤ 25 kg/m² in both groups. BMI values in the PCOS group were significantly higher than in the controls ($p<.05$). BDI scores were significantly higher in the PCOS group compared to that in the healthy controls ($p<.05$). There was no significant difference between the PCOS group and healthy controls in BIS and RSES scores ($p>.05$).

Conclusion: The present study suggests that PCOS seems to be associated with depressive symptomatology. Furthermore, rising BMI values of these women may be an indicator for the onset of PCOS. However, these results should be confirmed by prospective studies. (Archives of Neuropsychiatry 2014; 51: 129-132)

Key words: Body image, depression, PCOS, self esteem

Conflict of interest: The authors reported no conflict of interest related to this article.

ÖZET

Giriş: Bu çalışmada Polikistik over sendromu (PKOS) olan kadınlarda beden algısı, benlik saygısı ve depresif belirtilerin saptanması ve sağlıklı kontrol grubu ile karşılaştırılması amaçlanmıştır.

Yöntem: Çalışma, Selçuk Üniversitesi Tıp Fakültesi Kadın Hastalıkları ve Doğum polikliniğine ayaktan başvuran tedavi edilmemiş PKOS tanısı alan kadın hastalar üzerinde yapılmıştır. Çalışma kriterlerini karşılayan toplam PKOS tanılı 83 kadın çalışmaya dâhil edilmiştir. Selçuk Üniversitesi hastane personelinin alınan ve yaşla eşleştirilmiş sağlıklı 64 kişi ise kontrol grubu olarak belirlenmiştir. PKOS tanısı Rotterdam kriterlerine göre konmuştur. Katılımcıların sosyodemografik özellikleri kaydedildikten sonra Beden İmajı ölçeği, Rosenberg Benlik Saygısı Ölçeği ve Beck Depresyon Ölçeği katılımcılar tarafından doldurulmuştur.

Bulgular: Hasta ve kontrol grubu arasında yaş, eğitim ve ekonomik durum açısından fark saptanmadı ($p>.05$). Psikiyatrik hastalık öyküsü PKOS olan kadınlarda anlamlı olarak yüksekti ($p<.05$). Her iki grupta da BMI ≤ 25 kg/m² idi. Vücut kitle indeksi PKOS grubunda kontrol grubundan daha yüksekti ($p<.05$). Beck depresyon ölçek puanı PKOS olan grupta kontrol grubuna göre anlamlı olarak yüksekti ($p<.05$). Her iki grup arasında Beden İmajı Ölçek puanları ve Rosenberg Benlik saygısı ölçek puanları arasında anlamlı bir fark saptanmadı ($p>.05$).

Sonuç: Bu çalışma PKOS'un depresif semptomlarla ilişkili olduğunu göstermiştir. Ayrıca BMI'indeki artış, PKOS başlangıcı için bir gösterge olabilir. Ancak bu sonuçlar prospektif çalışmalarla desteklenmelidir. (Nöropsikiyatri Arşivi 2014; 51: 129-132)

Anahtar kelimeler: Beden imajı, depresyon, PKOS, benlik saygısı

Çıkar çatışması: Yazarlar bu makale ile ilgili olarak herhangi bir çıkar çatışması bildirmemişlerdir.

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Introduction

Polycystic ovary syndrome (PCOS) is a common endocrine disorder during a woman's reproductive period. It is estimated that 5%-10% of the women have this disease (1). Common features of PCOS include menstrual disturbance, hirsutism, acne, alopecia, obesity and infertility. Moreover, PCOS is characterized by hyperandrogenism and related to insulin resistance and other metabolic conditions (2). These clinical manifestations may affect negatively on the mental health.

In the literature, the treatment of women with PCOS is generally emphasized on the physical outcomes. PCOS is also associated with psychosocial problems, including chronic stress, depression, anxiety and decreased self-esteem, which are relevant for several reasons (3). Several studies have established that women with PCOS are more likely to experience depressive symptoms than women without PCOS (4,5,6).

Obesity is common among women with PCOS. Approximately two thirds of women with PCOS are overweight or obese, and obesity has been implicated in depression in women in the general population (7,8,9,10). Furthermore it has been shown that women with PCOS and clinical symptoms of hirsutism and acne have greater body dissatisfaction than in healthy control (5,11). Pastore et al. suggests that among non-obese PCOS women, their subjective body image was strongly associated with the severity of their depression symptoms (12).

In the current study we aimed to determine body image, self-esteem and depressive symptomatology in women with PCOS and compare with healthy controls.

Methods

Setting and Sample

This study was conducted among the patients with untreated PCOS who admitted to the Outpatient Clinic of Gynecology and Obstetrics of Faculty of Medicine of Selçuk University. The exclusion criteria for the study were the following: a history or existence of bipolar disorder, schizophrenia or related disorders, a history of neurological disease and concomitant severe medical illnesses (e. g., cardiovascular or pulmonary diseases, severe renal or liver failure, any cancer) and those who were under hormone replacement or psychotropic medications within the last 4 weeks. A total of 83 consecutive women with PCOS who met the criteria of present study were included in the study. Age matched healthy controls (n=64) were recruited from employees at Selçuk University Hospital. Additional exclusion criteria for controls were any known medical condition or current psychiatric disorder, irregular periods or hormonal disturbance.

Procedures

The objectives and procedures of the study were explained and written informed consent was obtained from all participants. In addition, the study was approved by the ethical committee of Faculty of Medicine of Selçuk University. PCOS was defined according to criteria by Rotterdam ESHRE/ASRM-sponsored PCOS consensus workshop group. Women with PCOS (n=83) all met the Rotterdam criteria for PCOS (13). After recording socio-

demographic characteristics of the participants in the outpatient clinic of the gynecology and obstetrics, Body Image Scale, Rosenberg Self-Esteem Scale and Beck Depression Inventory were completed by the participants.

Measurements

Body Mass Index (BMI)

Body Mass Index (BMI) was calculated as the ratio of weight in kilograms to square of height in meters (kg/m^2).

Body Image Scale (BIS)

Body Image Scale measures the satisfaction from various parts of the body. This self questionnaire was developed by Secord and Jourard in 1953 (14). This is a likert type scale and composed of 40 items. It has no cut off point. Low points indicate unsatisfaction. The Turkish version of BIS has been validated by Hovardaoğlu in 1993 (15).

Rosenberg Self-Esteem Scale (RSES)

Self-esteem was measured using the Rosenberg Self-Esteem Scale (RSES) (16). The RSES is a 10-item measure of positive and negative aspects of self-esteem. The responses were scored on a 4-point Likert scale ranging from 0 (strongly agree) to 3 (strongly disagree). The overall score was computed by summing the individual items scored for minimum and maximum scores of 0 and 30, respectively. The sum of the scores was classified according to level of self-esteem, with 15-25 considered normal and scores <15 considered low self-esteem. The instrument has been extensively used in various healthy and nonhealthy populations, and its reliability and validity has been supported for measuring self-esteem (16). The Turkish version of RSES has been validated by Çuhadaroğlu (17).

Beck Depression Inventory (BDI)

The severity of depressive symptoms was assessed using the Beck Depression Inventory (BDI). The Turkish version of the BDI used in this study has been validated in Turkish populations (18).

Statistical Analysis

All analyses were performed with SPSS version 15.0 for Windows. Data met the criteria for parametric analysis. The chi-square test was used to evaluate socio-demographic data (education, marital status, employment, economic status, previous psychiatric history). Independent samples't test was used to determine whether there were differences between patients and controls for age, BMI, BDI, BIS and RSES scores. Statistical significance was assumed as $p < .05$.

Results

A total of 83 women with PCOS and 64 age matched healthy women were recruited.

PCOS group was compared with the control group for socio-demographic characteristics (Table 1). Patients with PCOS and healthy controls did not differ in some socio-demographic variables, including age, education and economic status ($p > .05$). Being employed and being married was more prevalent among the control group. However, previous psychiatric history was more prevalent among the PCOS group ($p < .05$).

The mean±S.D. BMI of PCOS and control groups were 23.85 ±4.67 kg/m² and 22.00±2.43 kg/m², respectively. Body mass index values of the PCOS group were significantly higher than the controls (p<.05). A clinically obese subject does not exist in both groups (BMI ≤25 kg/m²)

Beck depression inventory scores were significantly higher in the PCOS group compared to the healthy controls (p<.05). There was no significant difference between the PCOS group and healthy controls for Body Image Scale (BIS) scores and Rosenberg Self-Esteem Scale (RSES) scores (p>.05). Body mass index, BDI, BIS and RSES scores are presented in Table 2.

Discussion

The main finding of this study is that depressive symptomatology is more prevalent among women with PCOS than healthy controls. Although women with PCOS were not obese, their BMI were greater than healthy controls in our study. Furthermore, previous psychiatric history was more prevalent among the PCOS group. However we didn't find any difference between PCOS and control groups in terms of body image and self esteem.

Our depression symptom scores support the few prior reports of a high prevalence of depression/depression symptoms in women with PCOS (5,19,20). Some authors suggest that women with hyperandrogenic syndromes may be at an increased risk for mood disorders due to an association between elevated

androgen levels and depression (21,22). Rasgon et al. (21) suggest that women receiving oral contraceptives for the treatment of PCOS were less depressed than patients not receiving this type of treatment. However, we did not evaluate hormone levels of women with PCOS and healthy controls. In this study, we found previous psychiatric history was more prevalent among the PCOS group. However, we didn't conduct psychiatric clinical Interview.

Obesity is common among women with PCOS. Obesity and resistance to insulin plays a significant role in the pathogenesis of PCOS. Obesity itself increases the risk of insulin resistance, although insulin resistance can also occur in the absence of obesity in PCOS (2,23). Obesity also linked to depression (10). Furthermore, many studies have reported an association between insulin resistance and depression (24). However, we didn't analyze the relationship between insulin resistance and depression in this study.

Previous studies have noted a positive correlation between BMI and depressive symptoms in women with PCOS (19,20,25). In this study, although there was no clinically obese for PCOS group, BMI values of the PCOS group were significantly higher than the controls. All of the patients with PCOS were young and newly diagnosed for PCOS. Therefore, our patients were less exposed to hyperandrogenic effect. For this reason, our findings may be not consistent with the previous findings.

Pastore and colleagues suggest that a strong positive association between depression symptom severity and dissatisfaction with their physical appearance and physical conditioning in women with PCOS (12). Niet et al. (26) reported that women with PCOS had lower levels of self esteem, greater fear of negative appearance evaluation. In mentioned study, it was determined that clinical characteristics such as hyperandrogenism and acne were associated with poorer body satisfaction, whereas hirsutism and BMI unfavorably affect all measured psychosocial variables. However, we didn't found any differences between the BIS scores and self-esteem scores of women with PCOS and healthy controls. This reason can be explained as follows, women with PCOS who participated in this study were not obese, young and newly diagnosed for PCOS. There was no long-lasting hormonal effect in these women. We should note as a limitation that we didn't evaluate acne and hirsutism in women with PCOS. Therefore, this study couldn't reveal a connection between physical consequences such as acne and hirsutism and depressive symptomatology. The cross-sectional design restricts the interpretation of an association between

Table 1. Socio-demographic data of the groups

	PCOS (n=83) Mean±SD	Control (n=64) Mean±SD	p
Age (mean years±S.D) ^a	22.27±1.84	22.85±2.06	>.05
Marital status ^b			
Married (%)	2 (2.4)	11 (17.2)	<.001
Single (%)	81 (97.6)	53 (82.8)	>.05
Education ^b			
Elementary School(%)	1 (1.2)	1 (1.6)	>.05
High School (%)	15 (18.1)	11 (17.2)	>.05
University (%)	67 (80.7)	52 (81.3)	>.05
Employment status ^b			
Employed (%)	8 (9.6)	30 (46.9)	<.001
Unemployed (%)	75 (90.4)	34 (53.2)	>.05
Economic status ^b			
Low economic status (%)	3 (3.6)	7 (10.9)	>.05
Medium economic status (%)	75 (90.4)	54 (84.4)	>.05
Good economic status (%)	5 (6.0)	3 (4.7)	>.05
Previous psychiatric history ^b			
Present (%)	26 (31.3)	3 (4.7)	<.001
Absent (%)	57 (68.7)	61 (95.3)	>.05

^aindicates t test
^bindicates χ^2 test

Table 2. Body Mass Index (BMI), Beck Depression Inventory (BDI), Body Image Scale (BIS) and Rosenberg Self-Esteem Scale Scores (RSES) of PCOS and control groups

	PCOS (n=83) Mean±SD	Control (n=64) Mean±SD	t	p
BMI (kg/m ²)	23.85±4.67	22.00±2.43	3.107	.002
BDI score	14.60±8.54	6.07±3.85	8.884	<.001
BIS score	97.62±20.44	93.14±17.13	1.414	.16
RSES score	20.02±5.48	20.39±3.32	-.501	.61

depressive symptomatology and body image and self-esteem on women with PCOS in the present study. Another limitation of this study is that the newly diagnosed subject could not show that long-lasting hyperandrogenic effect in PCOS women.

In conclusion, despite several limitations, the present study suggests that PCOS seems to be associated with depressive symptomatology. Furthermore, rising BMI values of these women may be an indicator for the onset of PCOS. However, these results should be confirmed by prospective studies.

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