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Polikistik Over Sendromlu Kadınlarda Cinsel Disfonksiyon
Sexual Dysfunction In Women With Polycystic Ovary SyndromeTuğba GÜRBÜZ¹ Orcid ID:0000-0003-3555-3767¹ Medistate Hospital Gynecology and Obstetric Clinic, İstanbul, Turkey**ÖZ**

Amaç: Üreme çağındaki kadınlarda obezite, bozulmuş glikoz toleransı, düzensiz adet döngüsü, infertilite, hirsutizme neden olan ve kadınların % 5 - 10'unu olumsuz etkileyen ciddi endokrinolojik rahatsızlıklardan biri Polikistik over sendromudur (PKOS). Çalışmamızın amacı, PKOS'lu kadınlarda Cinsel İşlev Bozukluğu (CİB) sıklığını araştırmak ve buna neden olabilecek sebeplerin belirlenmesidir.

Gereçler ve Yöntem: Çalışmamız, prospektif kesitsel vaka-kontrol çalışmasıdır. Çalışmaya katılmayı kabul eden gönüllülerden tıbbi ve cinsel öykü alınarak 19 sorudan oluşan Kadın Cinsel İşlev Ölçeği (Female Sexual Function Index-FSFI) formu dolduruldu. PKOS'lu kadınların ve kontrol grubunun total FSFI skorları ve alt grup skorları karşılaştırıldı.

Bulgular: Olgu ve kontrol grubundaki ortalama yaş sırasıyla 34.35 ± 4.16 ve 34.80 ± 4.36 olarak elde edilmiştir. Ayrıca, iki grupta da evliliğin ortalama süresi olgu ve kontrol grubu sırasıyla 5.00 ± 2.18 ve 5.76 ± 2.20 olarak elde edilmiştir. Gruplar arası Vücut kitle indeksi (VKİ), sırasıyla 24.88 ± 2.23 ve 24.77 ± 2,01'dir. Gruplar arası FSFI alt grup skorları incelendiğinde PKOS'lu kadınlarda sadece lubrikasyon skoru istatistiksel açıdan anlamlı olarak yüksekti (3.08 ile 3.60, p-value=0.029). PKOS'lu hastaları VKİ'lerine (Normal, Fazla Ağırlıklı ve Obez) göre gruplara ayırdığımızda, istek ve uyarılma alt grup skorlarında istatistiksel olarak anlamlı farklılık saptandı (sırasıyla P=0.045 ve P=0.050).

Sonuç: PKOS'un, kadınların cinsel fonksiyonları üzerine hiçbir etkisi saptanmamıştır. PKOS'lu kadınların lubrikasyonlarının kontrol grubuna göre daha yüksek olduğu tespit edilmiştir. Obezitenin de yine cinsel fonksiyon bozukluğu üzerine bir etkisi saptanmamıştır.

Anahtar Kelimeler: Vücut Kitle İndeksi, FSFI, Polikistik Over Sendromu, Cinsel Fonksiyon Bozukluğu, Cinsel Yaşam Kalitesi

ABSTRACT

Aim: One of the serious endocrinological disturbances which affects 5 to 10% of women in the age of reproduction leading to obesity, disturbed glucose tolerance, irregular menstrual cycle, infertility and hirsutism is "polycystic ovary syndrome (PCOS)". This study aimed to investigate sexual dysfunction in women with PCOS.

Material and Methods: A prospective cross-sectional case-control study was done. The subdomain sexual function scores and the mean Female Sexual Function Index (FSFI) total scores between controls and the women with PCOS. And the subdomain sexual function scores and the mean FSFI total scores between women with PCOS stratified by BMI.

Results: The mean age in two case and control group was 34.35 ± 4.16 and 34.80 ± 4.36 years. Also, the mean duration of marriage in two case and control group was 5.00 ± 2.18 and 5.76 ± 2.20. The mean BMI in two case and control group was 24.88 ± 2.23 and 24.77 ± 2.01. The difference between the groups with all FSFI subdomains, the only difference between the two groups in lubrication was significant (3.08 vs. 3.60, p-value=0.029). Results showed that a significant difference was found among the BMI groups (Normal, Overweight and Obese) in arousal and desire (P=0.045 and P=0.050, respectively).

Conclusion: PCOS has no effect on sexual dysfunction of women. Even the sexual function of women with PCOS has been reported to be higher in lubrication. BMI also has no effect on the relationship between PCOS and sexual dysfunction.

Key Words: Body Mass Index, FSFI, Polycystic Ovary Syndrome, Sexual Dysfunction, Sexual Quality of Life

INTRODUCTION

One of the serious endocrinological disturbances which negatively affects 5 to 10% of women in the age of reproduction leading to obesity, disturbed glucose tolerance, irregular menstrual cycle, infertility, arterial hypertension, and hirsutism is "polycystic ovary syndrome (PCOS)". The symptoms which are usually related to PCOS are subfertility, acne, anovulation, obesity, hirsutism, oligomenorrhea and amenorrhea which reduce the quality of life among the women while causing some mental disorders such as depres-

sion, social and marital maladjustment, and low sexual function (1). The importance of the sexual life of the patients who had PCOS has been often neglected in the clinics (1). Sexuality has a high effect on the well-being of women (2). All aspects of satisfying sexuality will result from the sexual quality of life meaning that sexual quality not only means the absence of a disorder or illness but also means the ability to start and keep the sexual and romantic relationship (3).

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As mentioned above, PCOS as one of the important disorders which affect and impair sexual quality of life is now defined as a combined ovarian dysfunction (polycystic ovaries or oligo-anovulation) and hyperandrogenism (hyperandrogenemia or hirsutism) (4,5).

Sexual dysfunction is prevalent among the women with PCOS. Higher patient satisfaction and lower health-care cost will result from immediate diagnosis and management (6). Sexual dysfunction is here defined as a problem during any sexual response cycle phase which prevents the person from being satisfied with sexual activity due to physical, social, and psychological factors (7).

This study aimed to investigate sexual dysfunction in women with PCOS. To that end, the subdomain sexual function scores and the mean Female Sexual Function Index (FSFI) total scores were compared between controls and the women with PCOS and then the subdomain sexual function scores and the mean FSFI total scores were compared between women who had PCOS stratified by BMI.

MATERIAL AND METHODS

This prospective cross-sectional case-control study was approved by the Ethics Committee of Beykoz University (2020/8.1). A total of 99 women participated in this study from January 2020 to March 2020. The control group included 49 women and the case group consisted of 50 women with PCOS. All participants presented the informed consent before enrolling in the study.

FSFI scale as a standardized and validated self-report was applied for measurement of the sexual dysfunction. There was a comparison of the total FSFI scores and each sub-domain score of women who had PCOS and the controls.

Six domains including desire (the interest to have sexual experience), arousal (having a desire for sexual relation followed by stimulations), lubrication, orgasm (reaching orgasm after arousal and stimulation), satisfaction and pain measured based on patients' self-report were included in the FSFI score. Arousal (4 questions), desire (2 questions), orgasm (3 questions), satisfaction (3 questions), lubrication (4 questions), and pain (3 questions) are the six domains of the scale items. The sum of all scores obtained in all six domains was the total FSFI score. Better sexuality will result from a higher score.

STATISTICAL ANALYSIS

Before performing the statistical analyses, the normality was checked using the Kolmogorov-Smirnov test and the nonparametric tests were used considering the non-normality of the groups. For each continuous variable including BMI and age, standard deviations (SD) and mean were measured. To compare the groups, all five sexual function subscales and total sexual functioning mean scores were measured.

To study the relationship between two case and control groups in terms of the variables of cigarette use, infertility time, menstruation, dyspareunia, and hirsutism, the chi-square test was used. To study the difference between the two case and control groups in all FSFI subdomains, the Mann-Whitney test is used. Then, to study the effect of BMI, we include this variable discontinuously and define BMI variable as normal (18.5–24.9), overweight (25–30), and obese (>30). All statistical analyses were performed with SPSS v20.

RESULTS

The mean age in two case and control group was 34.35 ± 4.16 and 34.80 ± 4.36 years, respectively. The mean BMI of the case group is 24.88 ± 2.23 and the mean BMI of the control groups is 24.77 ± 2.01 . Also, the case group had the mean marriage duration of 5.00 ± 2.18 and the control group had the mean marriage duration of 5.76 ± 2.20 .

Table 1: Comparing subdomain sexual function scores and mean FSFI total scores between

PCOS and control group.

Category	PCOS	Control	P-value
	(mean \pm SD)	(mean \pm SD)	
desire	3.71 ± 1.22	3.43 ± 1.33	0.298
arousal	3.91 ± 1.29	3.61 ± 1.35	0.337
lubrication	3.60 ± 1.29	3.08 ± 1.24	0.029
orgasm	2.89 ± 1.44	2.96 ± 1.27	0.778
satisfaction	2.88 ± 1.40	2.92 ± 1.23	0.913
pain	1.24 ± 1.09	0.93 ± 0.96	0.127
Total score	18.25 ± 3.95	16.95 ± 4.09	0.169

There is no significant difference in FSFI total scores between the women with PCOS and the women without PCOS (p-value=0.169) but in lubrication. To study the difference between the groups with all FSFI subdomains which are given in Table 1, the only difference between the two groups in lubrication was significant (3.08 vs. 3.60, p-value=0.029). It is found that the women with PCOS have higher lubrication score than the healthy women have. In other words, there is no significant difference between two groups except in lubrication.

To study the difference among the women with PCOS, all FSFI scores stratified by BMI are given in Table 2. There is no significant difference in FSFI total scores stratified by BMI among the women with PCOS (p-value=0.179) but in arousal and desire.

Results show that a significant difference was found among the BMI groups (Normal, Overweight and Obese) in arousal and desire (P=0.045 and P=0.050, respectively).

It was found that the higher BMI, the higher arousal and desire subdomains among the women who had PCOS that is high BMI has increased these two sexual function scores.

Table 2: Comparing subdomain sexual function scores and mean FSFI total scores between women with PCOS stratified by BMI

Category	Normal BMI	Overweight	Obese	P-value
	(mean \pm SD)	(mean \pm SD)	(mean \pm SD)	
desire	3.32 ± 1.23	4.24 ± 1.08	4.20 ± 0.00	0.045
arousal	3.53 ± 1.37	4.42 ± 1.05	4.35 ± 0.21	0.050
lubrication	3.61 ± 1.27	3.60 ± 1.42	3.45 ± 0.21	0.976
orgasm	2.97 ± 1.31	2.64 ± 1.62	4.20 ± 0.84	0.306
satisfaction	2.81 ± 1.32	2.80 ± 1.52	4.60 ± 0.28	0.186
pain	1.37 ± 0.97	1.09 ± 1.31	1.00 ± 0.28	0.314
Total score	17.63 ± 4.06	18.80 ± 3.81	21.80 ± 1.27	0.179

Then, to study the relationship between two groups in terms of the discontinuous variables such as cigarette use, infertility time, menstruation, dyspareunia and hirsutism, the chi-square test was used. A significant difference was found between the two groups only in menstruation (p-value= 0.034).

DISCUSSION

Recently, there was increasing interest in the investigation of the effect of PCOS on the sexual quality of life. Due to the importance of the sexual quality of life, the focus of this study was on assessment of the sexual dysfunction in women who had PCOS.

In this study, sexual dysfunction of the women was assessed with the FSFI scale as standardized and validated sexual inventory (8). Based on the result, there is no significant difference in FSFI total scores between the women with PCOS and without PCOS. The important discontinuous variables used to define PCOS include cigarette use, infertility time, menstruation, dyspareunia, and hirsutism. This study showed that a significant difference was found between two groups only in menstruation (p-value= 0.034) while no significant difference was found between two groups in variables of cigarette use, infertility time, dyspareunia and hirsutism. Our results show that sexual dysfunction

among PCOS patients associated with menstruation is highly prevalent.

In our study, the results show that a significant difference was between two groups stratified by BMI in arousal and desire ($P=0.045$ and $P=0.050$, respectively). High BMI levels had increased desire and arousal among the women with PCOS. The FSFI scoring system showed that desire and arousal were two domains which were the most significantly affected domains among these participants before satisfaction, orgasm, and pain disorders, respectively.

However, this study shown that generally there was no difference in FSFI total scores between the women with PCOS and without PCOS. Based on the results, the only difference between the two groups in lubrication was significant.

Some researchers have studied the relationship between sexual dysfunction and PCOS.

Stoval et al. (9) found that the women who had PCOS showed a significantly lower orgasm than the women in the control group ($P < 0.001$). This doesn't support our finding that there is no significant difference between PCOS and the control group in orgasm score.

Koneru et al. (6) showed that there were lower desire, lubrication, and orgasm among the women with PCOS. This is not in line with the result of our study showing that the women with PCOS had higher lubrication than the controls had. In our study, there is no significant difference between PCOS and the control group in orgasm and desire scores.

Our study results also do not support the result of a study by Elsenbruch, et al (10), that the quality of life will be reduced and satisfaction will be limited by PCOS.

Eftekhar et al. (11) found that there was verified sexual dysfunction of 57.7% among the patients with PCOS in domains of desire and arousal which were affected in 99.2% and 98.5% of cases, respectively. Sexual desire and arousal were significantly affected by BMI ($p=0.02$), while on all domains but dyspareunia ($p<0.001$ based on total FSFI score) was significantly affected by hirsutism. This is not in line with the result of our study that showed that high BMI increased sexual desire and arousal of the women with PCOS.

Ercan et al. (12) found that women with PCOS did not have lower sexual function than controls with the same ages based on the FSFI scores. This is supported by finding of our study.

Drosdzol et al. (13) found that the quality of life is reduced by polycystic ovary syndrome, in terms of physical health and this is not supported by our study results.

Shafti & Shahbazi (14) study found no difference between women with PCOS and healthy women in sexual function which is supported by our study results.

Veras et al. (15) observed that the sexual function was not habitually impaired in patients with PCOS. In this research, similar results have been also observed and our research results are supported by this research.

Recent study has been done by Thannickal A et al.(16), which had evaluated the relationship between PCOS and eating, sleeping and sexual function disorders. Based on this research, there was also no relationship between FSFI and PCOS. This research has generally concluded that PCOS has had negative effect on sexual satisfaction. The first part of the conclusion is in line with our research finding but negative effect of PCOS on the sexual function is not supported by our research.

As indicated in the above studies, there have been conflicting results which show that PCOS has had moderate to no effect on the sexual function.

This research is important since it can help the researchers and physicians investigate the relationship between PCOS and sexual dysfunction. On the contrary to what is prevalent and the relationship between PCOS and sexu-

al dysfunction, this research shows that there is no significant relationship between PCOS and sexual dysfunction. Besides, the research findings show that the women with PCOS had higher score in lubrication. This study contributed to the knowledge about the relationship between sexuality and PCOS.

It is necessary to note that BMI has no effect on the sexual dysfunction of the women with PCOS. This is important because most women suffering from PCOS are socially put under pressure to lose their weight unsafely and expeditiously. Due to high anxiety relating to weight loss and food habits, they will have mood disorders. These symptoms may have varying severity due to trait anxiety, self-esteem sense and pressures related to lifestyle (17). In summary, it is not scientific to put pressure on the women with PCOS to lose their weight in order to reach desirable sexual function.

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