Klinik Çalışma

Anxiety Scoring in Asymptomatic Premenopausal Patients with Benign Ovarian Cyst

Gokalp Oner[*], Pasa Ulug[**], Hicran Karaca Sonmezer[***], Iptisam Ipek Muderris[****]

Abstract

Aim: The aim of this study was to investigate the effect of oral contraceptive usage and follow-up management on the anxiety levels of asymptomatic premenopausal patients with benign ovarian cyst.

Methods: Ninety asymptomatic premenopausal women were admitted to this prospective study. All of the women (21-39 years) underwent gynecological examination and transvaginal ultrasound examination. The patients with benign ovarian cyst were followed up in 3 months and divided into 2 groups. Although Group 1 was begun with oral contraceptive containing with ethinyl estradiol plus drospirenone, Group 2 was followed up without any medical treatment. Group 3 was the healthy control group without any ovarian cyst. Anxiety levels were measured by State Trait Inventory (STAI) when the patient firstly learned having cyst and after 3 months.

Results: The demographic characteristics of the groups were similar. Cyst diameter and CA-125 levels were comparable between the group 1 and 2. Anxiety scores were statistically significant higher in follow-up group with ovarian cyst. Anxiety scores were lower in the oral contraceptive administered group than follow-up group. However, all of the groups that learned having benign ovarian cyst had increased anxiety scores comparing with healthy control.

Conclusion: Having benign ovarian cyst without any malignancy suspicion was associated with increasing anxiety in women. Although oral contraceptive usage was not superior than following-up management for the benign ovarian cyst treatment, oral contraceptive administration might decrease patient's anxiety.

Key words: Anxiety, Benign ovarian cyst, combined oral contraceptive, Drospirenone; Ethinyl estradiol

Introduction

Although the prevalence of ovarian cysts in the general population has not been described in detail, cross sectional studies using ultrasound have shown that 4 to 7% had ovarian cysts >30 mm in diameter (1, 2). Benign ovarian cysts are a common gynecological problem among women of reproductive age worldwide. Based on the suppressor effect against gonadotropins promote

[*]Department of Obstetrics and Gynecology, Mugla Sitki Kocman University, Mugla, Turkey

[**]Department of Obstetrics and Gynecology, Erzincan University, Erzincan, Turkey

[***]Department of Analgesia, Acibadem University Hospital, Kayseri, Turkey

[****]Department of Obstetrics and Gynecology, Erciyes University, Kayseri, Turkey

Corresponding Author: Gokalp Oner Assistant Professor, MD,

Department of Obstetrics and Gynecology, Mugla Sitki Kocman University, Mugla, Turkey

Tel: 0905062346822

E-mail: onerg@yahoo.com

Makalenin Geliş Tarihi: 22.07.2014

Makalenin Kabul Tarihi: 01.09.2014

follicular growth functional cysts, some clinicians inferred that oral contraceptives might be useful for treatment as well as prevention. Since combined oral contraceptives (COC) suppress gonadotropins, pills might decrease cyst size. However, according to Cochrane review treatment of functional ovarian cysts with COC appears no better than watchful waiting (3). Most such cysts resolve spontaneously with or without treatment (4).

In clinical practice, women who have unilateral, mobile, unilocular, thin-walled cysts without internal echoes, has been generally waited cyst to regress spontaneously according to the gynecologist's recommendation. Indeed, functional cysts are known to regress spontaneously without any treatment (4). However, some clinicians prefer COC because of the treatment expectation of the patients with functional cysts. In addition, anxiety status of the patients with functional cysts has not been evaluated in the literature. Anxiety status of the patients using COC or waiting without any treatment has not been compared, yet. The Spielberger State-Trait Anxiety Inventory is a

well-known 40-item instrument, measuring respectively transient and enduring levels of anxiety (5).

The aim of the present study is to assess and compare the anxiety status of expectant management and COC usage in asymptomatic premenopausal women with benign ovarian cysts.

Material Methods

Ninety asymptomatic premenopausal women were admitted to this prospective controlled study. All patients without any complaint were examined for their yearly routine gynecological examination. All of the women (21-39 years) underwent gynecological examination and transvaginal ultrasound examination. All study participants completed a questionnaire regarding past medical history as well as family history of cancer. The study protocol was approved by the Ethics Committee of Erciyes University Hospital. Oral informed consent was obtained from each patient. Sixty patients were randomly divided into two groups.

Any woman with a known ovarian tumor or a personal history of ovarian cancer was excluded from this investigation. Eligibility criteria included all women had 35 ≤ CA-125 U/ml values, no malignancy and any infection. Sixty patients in whom ultrasonography revealed unilateral, mobile, unilocular, thin-walled ovarian cysts without internal echoes and greater than 30 mm but not exceeding 60 mm in diameter were enrolled into the study. The patients with benign ovarian cysts were followed up in 3 months and randomly divided into 2 groups. Although Group 1 was treated with COC containing with ethinyl estradiol plus drospirenone, Group 2 was followed up without any treatment. Group 3 was the healthy control group without any ovarian cyst and gynecological disorder. Anxiety levels were measured by State Trait Inventory (STAI) when the patient firstly learned having cyst and after 3 months. STAI was applied to the patients by the same operator (H.K.S.) blinded to the groups.

The Spielberger Trait Inventory (STAI) contains 20 items and measures the subjective level of anxiety in general. Subjects rate each item on a 1-4 scale. High scores indicate high levels of anxiety (6). The STAI was standardized for a Turkish population by Oner and Le Comte in 1985 (7). The STAI state scale is scored on four levels of anxiety intensity from 1 = 'not at all' to 4 = 'very much' and with a sum score between 20 and 80. It is usually administered as a self-completion questionnaire. The 20 items are divided into two groups: ten items are formed to

record the presence of anxiety symptoms and the other ten items are scored to record the absence of anxiety symptoms. The latter are inverted for the purpose of calculating the sum score (5).

Numerical variables are presented as mean ± standard deviation. Non-normally distributed metric variables were analyzed using the Kruskal–Wallis test and the Mann–Whitney U-test. For normally distributed data, a paired t-test was used to compare the values. P ≤ 0.05 was considered to be statistically significant. All analyses were performed using Statistical Package for the Social Sciences Version 15.0 (SPSS Inc., Chicago, IL, USA). Finally, the power of the study is more than 90. Power of the study is 96.6%.

Results

The demographic characteristics of the groups were similar. Cyst diameter and CA-125 levels were comparable between the groups. Table 1 summarized the anxiety scores of the groups. Anxiety scores were statistically significant higher in following-up management group with ovarian cyst comparing other groups (41.4±3.7; 36.8±3.0 and 32.4±2.5, P ≤ 0.05). Anxiety scores decreased in the COC administered group comparing with follow-up group (36.8±3.0; 41.4 ±3.7, P ≤ 0.05). However, all of the groups that learned having benign ovarian cyst had increased anxiety scores comparing with healthy control (36.8±3.0 and 41.4±3.7; 32.4±2.5, P ≤ 0.05). Although persistence of the ovarian cysts in COC (23%) usage was higher than expectant management (16%), there was no statistically significant difference between the groups. In figure 1, anxiety scores of groups were revealed and after 3 months the anxiety scores were significantly higher in follow-up group compared with COC usage group.

Discussion

Anxiety symptoms are common in the general female population, occur at an early age, and coexist with other mood disorders such as depression. Anxiety is a chronic recurring disorder, it has been suggested that appropriate evaluation and treatment of anxiety symptoms at an early age may prevent the onset of secondary disorders (8). In clinical practice, patients with benign ovarian cysts generally have expectations to get a drug for the treatment of the cysts. However the medical treatment was not superior to expectant management. Most such cysts resolve spontaneously with or without treatment (3). When we search PubMed database, our study

Table 1. Demographic characteristics of the patients and STAI scores of the groups

	Group 1 (oral contraceptive)	Group 2 (placebo)	Group 3 (control)
Age	30.233 ± 5.728 [a]	29.067 ± 6.581 [a]	30.117 ± 5.334 [a]
Gravida	1.967 ± 1.299 [a]	2.167 ± 1.510 [a]	2.017 ± 1.341 [a]
Live birth	1.767 ± 1.278 [a]	1.533 ± 1.383 [a]	1.645 ± 1.311 [a]
Cyst diameter	4.767 ± 0.728 [a]	4.700 ± 1.088 [a]	0
CA-125	9.800 ± 3.527 [a]	11.433 ± 4.014 [a]	0
Anxiety scores	36.833 ± 3.018 [a]	41.400 ± 3.766 [b]	32.433 ± 2.501 [c]
Cyst existence after 3 months	7 (% 23) [a]	5 (% 16) [a]	0

Statistically significant difference is not present in groups sharing the same letter. All data sets of power of performed test with $\alpha = 0.050$: 0.966–1.000.
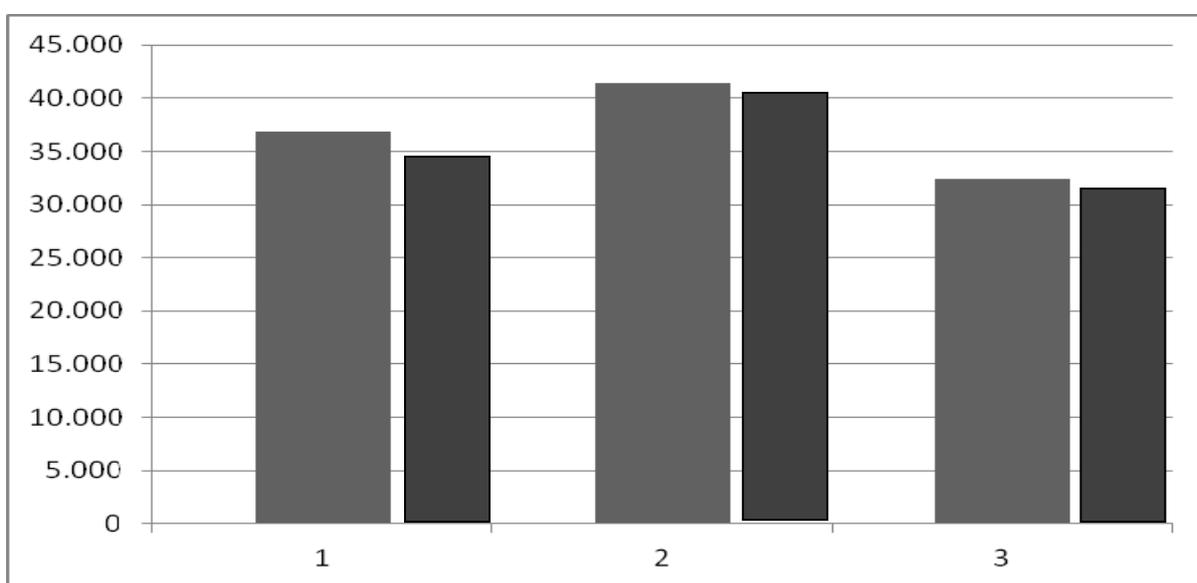

Fig. 1. Comparison of the anxiety scores before and after treatment in the group 1, 2, and 3, respectively.

is the first to examine the relation of anxiety in women with benign ovarian cysts. We report a high rate of anxiety in young women with benign ovarian cysts.

Earlier studies indicated that the use of high-dose combination COC was associated with a substantially reduced risk of functional cysts. Then the results of cohort studies supported that the conservative management of ultrasound benign appearing ovarian masses in selected asymptomatic premenopausal women could be safely offered and cheap (9). Expectant management for ovarian masses in asymptomatic premenopausal women has been proposed for functional cysts because it is known that a large proportion of these lesions will resolve spontaneously (10, 11). However, the role of expectant management of sonographically benign appearing ovarian tumors in asymptomatic non-pregnant premenopausal women has been little

explored. In Cochrane data, expectant management might be acceptable for benign ovarian cysts. In our study, two treatment modalities were similar results. Although persistence of the ovarian cysts in COC usage was higher in rate than expectant management, there was no statistically significant difference between the groups. Additionally, this prospective randomized study also showed that anxiety scores were lower in COC usage group.

When we searched PubMed database with "ovarian cysts, anxiety", there were studies found about the anxiety levels of polycystic ovarian syndrome (PCOS) (12, 13, 14). In these studies follow-up evaluation was pivotal to decrease anxiety levels of chronic diseases such as PCOS. Our study suggested that an increased anxiety level in women with benign ovarian cysts might be decreased in a short follow-up period, but patients generally expected a medical treatment

for ovarian cysts. This should be decreased anxiety levels of the patients.

Consequently, this preliminary study demonstrated that having benign ovarian cyst without any malignancy suspicion was associated with increasing anxiety in women. Although COC usage was not superior than following-up management for the benign ovarian cyst treatment, COC administration might decrease patient's anxiety.

Benign Over Kisti Olan Asemptomatik Premenopozal Hastalarda Anksiyete Skorlaması

Özet

Amaç: Bu çalışmamızın amacı oral kontraseptif kullanımı ile takip yönteminin benign over kisti olan asemptomatik premenopozal hastaların anksiyete seviyeleri üzerine etkisini araştırmak.

Yöntem: Doksan asemptomatik premenopozal bayan bu prospektif çalışmaya dahil edildi. Tüm bayanların (21-39 yaş) jinekolojik ve transvajinal muayeneleri yapıldı. Benign over kisti olan hastalar iki gruba ayrıldı ve 3 ay takip edildi. Grup 1'e drospirenon ve etinil östradiol içeren oral kontraseptif başlanırken grup 2'ye hiçbir medikal tedavi başlanmadı. Grup 3 herhangi bir ovariyan kisti bulunmayan sağlıklı kontrol grup idi. Anksiyete seviyeleri hastalar ilk kistlerinin olduğunu öğrendiğinde ve 3 ay sonra, Kişisel Özellik Hali (STAI) ile ölçüldü.

Bulgular: Grupların demografik karakterleri benzerdi. Kist çapı ve CA-125 seviyeleri grup 1 ve 2'de benzerdi. Anksiyete skorları ovariyan kisti olan takip grubunda istatistiksel olarak anlamlı yüksekti. Anksiyete skorları oral kontraseptif eklenen grupta takip grubuna göre daha azdı. Fakat anksiyete skorları sağlıklı kontrolle kıyaslandığında benign over kisti olduğunu öğrenen gruplarda artmıştı.

Sonuç: Herhangi bir malignensi şüphesi olmaksızın benign over kisti, bayanlarda artmış anksiyete ile ilişkilidir. Benign over kisti tedavisinde oral kontraseptif kullanımı ile takip yöntemi benzer olmasına karşın oral kontraseptif eklenmesi hasta anksiyetesini azaltmaktadır.

Anahtar kelimeler: Anksiyete, benign ovariyan kist, kobine oral kontraseptifler, drospirenon, etinil östradiol

References

1. Teichmann AT, Brill K, Albring M, Schnitker J, Wojtynek P, Kustra E. The influence of the dose of ethinylestradiol in oral contraceptives on follicle growth. Gynecological Endocrinology 1995; 9(2):299-305.

2. Christensen J, Boldsen J, Westergaard J. Functional ovarian cysts in premenopausal and gynecologically healthy women. Contraception 2002; 66(5):153-157.

3. Grimes DA, Jones LB, Lopez LM, Schulz KF. Oral contraceptives for functional ovarian cysts. Cochrane Database Syst Rev 2011; 7(9):CD006134.

4. Alcázar JL, Castillo G, Jurado M, García GL. Is expectant management of sonographically benign adnexal cysts an option in selected asymptomatic premenopausal women? Hum Reprod 2005; 20(11):3231-3234.

5. Spielberger CD, Gorsuch RL, Lushene PR, Vagg PR, Jacobs AG. 1983. Manual for the State-Trait Anxiety Inventory (Form Y). Consulting Psychologists Press, Inc.: Palo Alto.

6. Spielberger CD, Gorsuch RL, Lushene RD. STAI Manual. Palto Alto, Calif, Consulting Psychologist Pres 1970.

7. Oner N, LeCompte A. Sureksiz Durumluk/ Surekli Kaygı Envanteri 2. Basım. İstanbul: Boğazici Universitesi Yayınevi, 1998.

8. Wittchen HU, Kessler RC, Pfister H, Lieb M. Why do people with anxiety disorders become depressed? A prospective-longitudinal community study. Acta Psychiatr Scand Suppl 2000; 406:14-23.

9. Chiaffarino F, Parazzini F, La Vecchia C, Ricci E, Crosignani PG. Oral contraceptive use and benign gynecologic conditions. A review. Contraception 1998; 57(1):11-18.

10. MacKenna A, Fabres C, Alam V, Morales V. Clinical management of functional ovarian cysts: a prospective and randomized study. Human Reprod 2000; 15(12):2567-2569.

11. Alcázar JL, Errasti T, Jurado M. Blood flow in functional cysts and benign ovarian neoplasms in premenopausal women. J Ultrasound Med 1997; 16(12):819-124.

12. Barry JA, Kuczmierczyk AR, Hardiman PJ. Anxiety and depression in polycystic ovary syndrome: a systematic review and meta-analysis. Hum Reprod 2011; 26(9):2442-2451.

13. Dokras A, Clifton S, Futterweit W, Wild R. Increased prevalence of anxiety symptoms in women with polycystic ovary syndrome: systematic review and meta-analysis. Fertil Steril 2012; 97(1):225-230.

14. Açmaz G, Albayrak E, Acmaz B, Başer M, Soyak M, Zararsız G, et al. Level of anxiety, depression, self-esteem, social anxiety, and quality of life among the women with polycystic ovary syndrome. Scientific World Journal 2013; 2013:851815.