KÜ Tıp Fak Derg 2008;10(1)
ISSN 1302-3314
Orijinal Makale

Is Hormonal Therapy Needed in the Management of Functional Ovarian Cysts?

Aylin Pelin CİL,* Esmen OZTURKOGLU, Berfu DEMİR**, Muzeyyen GÜNES**,Ali HABERAL****

*Kirikkale University School of Medicine, Department of Obstetrics and Gynecology, Kirikkale, TURKEY
**Ankara Etlik Maternity and Women's Health Teaching and Research Hospital, Ankara, TURKEY

Abstract

Objective: The objective of this study was to determine whether the prescription of oral contraceptives has benefits over expectant management and to define the period of time necessary for the resolution of functional ovarian cysts.

Study Design*:* Thirty-six patients in whom unilocular, thin walled ovarian cysts without internal echoes and greater than 20 mm in diameter revealed by ultrasonography, were randomized to have expectant management (group I, n=18), or to receive oral contraceptives with 0.03 mg etinyl estradiol and 0.15 mg desogestrel (group II, n=18). If the cysts persisted, patients were re-evaluated after the first and the second cycle of the therapy

Results: After one cycle of therapy, resolution of the cysts was observed in 10 (55.5%) and 8 (44.4%) of the 18 patients in group I and II, respectively. Seven of the 18 persistent cysts were disappeared after the second cycle. Complete resolution of the cysts was 72.2% (n=13) in group I and 66.6% (n=12) in group II after two cycles. There was no statistically significant difference between the two groups in each cycle. Of the 11 women with persistent cysts, 7 underwent laparoscopy and was found to have pathological cysts.

Conclusion*:* Treatment of functional ovarian cysts with oral contraceptives is not superior to expectant management. Therefore, hormonal therapy is not needed in the management of functional ovarian cysts in normally menstruating women. If a cyst still persists after two months of expectant management, a surgical evaluation should be performed.

Key-Words*:* Functional ovarian cysts, oral contraceptives, expectant management.

Fonksiyonel Over Kistlerinin Tedavisinde Hormonal Tedavi Gerekli midir?

Özet

Amaç: Çalışmanın amacı fonksiyonel over kistlerinin tedavisinde oral kontraseptiflerin bekle-gör yaklaşımına üstünlüğü olup olmadığını saptamaktır.

Materyal metod: Uniloküler, ince duvarlı, içinde internal ekoları olmayan, 20mm' den büyük over kistleri olan 36 hasta bekle-gör yaklaşımı (grup I, n=18) ya da 0.03 mg etinil estradiol ve 0.15 mg desogestrel içeren oral kontraseptif (grup II, n=18) ile takip edilmek üzere iki gruba randomize edilerek çalışmaya alındı. Eğer kistler birinci ve ikinci siklus sonrasında persiste ediyorsa, hastalar tekrar değerlendirildi.

Sonuç: Bir siklus takip ve tedavi sonrasında birinci grupta 10 (55.5%), ikinci grupta 8 (44.4%) hastada kistler kayboldu. Persiste eden 18 kistin 7'si ise ikinci siklus sonrasi kayboldu. İki siklus sonunda birinci grupta kistlerin %72.2'si (n=13), ikinci grupta %66.6'sı (n=12) kayboldu. Her iki siklusta iki grup arasında anlamlı fark bulunmadı. Persiste eden kisti olan 11 hastanın7' sine laparoskopi uygulandı ve bu kistler patolojik olarak saptandı.

Tartışma: Fonksiyonel over kistlerine yaklaşımda oral kontraseptif tedavisi bekle-gör yaklaşımına göre üstün değildir. Normal menstrual siklusu olan hastalarda fonksiyonel over kistlerinin tedavisinde hormon tedavisine gerek yoktur. Bir kist iki ay takibe rağmen halen persiste ediyorsa, cerrahi olarak müdahale edilmelidir.

Anahtar kelimeler: fonksiyonel over kistleri, oral kontraseptifler, bekle-gör yaklaşımı

Introduction

Benign adnexal masses are common in the reproductive age group. The vast majority of ovarian cysts in women of reproductive age are physiological (functional) either follicular cyst or cystic corpus luteum. Follicular cysts may result from a failure in ovulation, most likely secondary to disturbances in the release of the pituitary gonadotropins. The fluid of the incompletely developed follicle is therefore not reabsorbed, producing an enlarged follicular cyst. Failure of the corpus luteum to regress in a non pregnant patient may result in development of a corpus luteum cyst. These cysts are mostly unilateral, unilocular, mobile, thin and smooth walled and rarely exceed 7-8 cm in diameter and they are mostly discovered as incidental findings [1].

The management of cystic adnexal mass in women of reproductive age remains a common gynecologic problem [2]. For years gynecologists have prescribed oral contraceptives containing a variety of estrogen and progestin combinations for the resolution of functional ovarian cysts [3]. The mode of action was attributed to supression of pituitary gonadotropin release.

The objective of this study was to investigate the need for hormonal treatment, to determine whether the prescription of oral contraceptives has benefits over expectant management in functional ovarian cysts and to define the period of time necessary for the resolution of functional cysts.

Materials and methods

Thirty-six patients in whom functional ovarian cysts were revealed by transvaginal ultrasonography within the first 5 days of the cycle, were prospectively recruited for the study. The transvaginal ultrasonographic examination was carried out using Aloka Prosound SSD 5500 (Aloka Co-ltd, Tokyo, Japan) equipment with a 3.75-7.5 MHz transvaginal transducer. Functional ovarian cyst was defined as unilocular, thin walled, echo free cysts measuring greater than 20 mm in diameter and without solid parts or papillary formations. At presentation all women underwent pelvic examination and a CA-125 level was seen. Only patients who had CA-125 level within normal limits were included in the study.

A total of 36 patients were randomized into two groups. The patients in group I (n=18) were followed by expectant management while patients in group II (n=18) were prescribed oral contraceptive pills containing 0.03 mg ethinylestradiol and 0.15 mg desogestrel. Ultrasonographic examination was repeated in the first 5 days of the next menstrual period. Resolution of the cyst was defined as complete disappearence. If the cyst persisted after the first cycle of therapy, the same management was repeated in each group for one more cycle and then sonography was repeated. If cysts were still observed after two cycles the patients were referred for surgical evaluation.

Statistical analysis was performed using the Fisher's exact test for comparisons of patient group outcomes. Differences associated with a p value of < 0.05 were considered statistically significant. Analyses were performed using the SPSS 11.0 for Windows statistical analysis package.

Results

The difference of the mean ages (35.6 vs 33.7 years), mean parities (1.5±1.2 vs 1.7±0.76) and the mean cyst diameters (47.05± 12.9 cm vs 42.11±13.3 cm) of the patients in group I and II was not statistically significant ($p>0.05$).

Resolution of the cysts was observed in 10 of 18 patients (55.5%) in group I and 8 of 18 patients (44.4%) in group II within one menstrual period. There were 7 patients whose cysts failed to resolve after the first cycle of treatment, but did resolve with a second cycle. Complete resolution of the cysts was observed in 72.2% of patients (n=13) in group I and in 66.6% of the patients (n=12) in group II after two cycles. In eleven patients cysts still persisted by the end of the second menstrual period. Of these 11 patients, seven underwent laparoscopic examination. Four of these seven patients was in group I and the remaining three was in group II and all of them were found to have pathological cysts. (Endometriomas in 2, dermoid cysts in 4 and paraovarian cysts in 1). The remaining four patients were also offered operative laparoscopy but did not want to have surgery. Then they were lost to follow-up.

Table I shows the disappearance rates of functional ovarian cysts in each group. There was no statistically significant difference in the disappearance rates of the functional ovarian cysts in two groups either after one cycle of therapy or at the end of the second cycle.

Table I: Disappearance rates of functional ovarian cysts in different managements

	Group I	*Group II*	*P value*
Disappearence % after one cycle	10/18 (55.5%)	8/18 (44.4%)	0.340
Disappearence % after two cycles	13/18 (72.2%)	12/18 (66.6%)	0.648

Discussion

It is widely accepted to treat functional ovarian cysts by oral contraceptives for one or two cycles [4]. Although it is generally accepted that estrogen progestin treatment prevents the formation of functional ovarian cysts by helping to establish a normal rhythm, there remains little evidence that these medications are effective in hastening the disappearance of these cysts once they are formed [5,6]. There are some trials suggestting that ovarian cyst resolution is not affected by oral contraceptives [2,4]. Despite these results the use of combined estrogen and progestin preparations become a common and accepted clinical practice for women having ovarian cysts in which the sonographic characteristics are benign [3].

The relationship between functional ovarian cysts and oral contraceptives are studied many times in the past. Some of them showed that using combined oral contraceptive pills protect the woman against functional ovarian cysts resulting from the suppression of the pituitary hormone secretion [5,6], but in 2001, ESHRE Capri Workshop Group stated that oral contraceptive pills are unlikely to prevent the development of functional cysts or to hasten their disappearance [7].

The effect of oral contraceptive therapy in patients with functional ovarian cysts which were formed in a program of ovulation

induction was studied in some trials [2-4]. In all these studies it is concluded that hormonal treatment is not necessary in cases with functional ovarian cysts after induction of ovulation. But these findings can be generalized only with caution to spontaneously ovulating women. In the present study we prospectively analyzed the effectiveness of oral contraceptive therapy in the resolution of functional ovarian cysts in spontaneously ovulating women. We did not find a significant effect of oral contraceptive administration on the disappearance rate of functional ovarian cysts over that of expectant management. The results observed in this study are in aggrement with previous reports [8-11]. Therefore, it seems unnecessary to prescribe hormonal treatment to patients having functional cysts. In our study, 7 patients with persistent cysts were found to have pathological cysts, the ultrasonographic appearence of those cysts was not typical for pathological cysts in the beginning. In the reports by Turan et al [8] and by Nezhat et al [11] it was seen that the majority of the persistent cysts were pathological cysts such as dermoid cysts, endometriomas, paraovarian cysts and hydrosalpinx. It can be concluded that spontaneous resolution of functional ovarian cysts occur within two months of expectant management. After that period of time a laparoscopy should be performed if a persistent cyst is observed because of the high probability of finding a pathological cyst.

Although the study population is small, we can conclude that hormonal treatment is not surerior to expectant management in spontaneously ovulating women. Oral contraceptive therapy should be considered in patients with functional cysts who also has menstrual irregularities.

References

1. Purcell K, Wheeler JE. Benign Disorders of the Ovaries and Oviducts. In: DeCherney AH, Nathan L. Current Obstetric and Gynecologic Diagnosis & Treatment 9th edition. Lange Medical Books Mc Graw Hill, 2003: 708.

2. Steinkampf MP, Hammond KR, Blackwell RE. Hormonal treatment of functional ovarian cysts: a randomized, prospective study. Fertility and Sterility 1990; 54: 775-777.

3. Mac Kenna A, Fabres C, Alam V, Morales V. Clinical management of functional ovarian cysts: a prospective, randomized study. Hum Reprod 2000; 15: 2567-2569.

4. Ben-Ami M, Geslevich Y, Battino S, Matilsky M, Shalev E. Management of functional ovarian cysts after induction of ovulation. Acta Obstet Gynecol Scand 1993; 72: 396-397.

5. Belaisch J, Hommais-loufrani B. Oral contraception and its beneficial gynecological effects. Fertil Contracept Sex 1988; 16(3 Suppl): 3-7.

6. Vessey M, Metcalfe A, Wells C, McPherson K, Westhoff C, Yeates D. Ovarian neoplasms, functional ovarian cysts and oral contraceptives. Br Med J (Clin Res ED) 1987; 294: 1518-1520.

7. ESHRE Capri Workshop Group. Ovarian and endometrial function during hormonal contraception. Hum Reprod 2001; 16(7): 1527-1535.

8. Turan C, Zorlu CG, Uğur M, Özcan T, Kaleli B, Gökmen O. Expectant management of functional ovarian cysts: an alternative to hormonal therapy. Int J Gynecol Obstet 1994; 47: 257-260.

9. Brun JL, Le Touze O, Leng JJ. Medical and surgical treatment of functional ovarian cysts. J Gynecol Obstet Biol Reprod 2001; 30(suppl 1): 41-52.

10. Peres JA, Baracat EC, Novo NF, Juliano Y Lima GR. Behaviour of cystic tumor of the ovary after wait and see management and hormonal treatment. Rev Paul Med 1991; 109(4): 165-173.

11. Nezhat FR, Nezhat CH, Borhan S, Nezhat CR. Is hormonal suppression efficacious in treating functional ovarian cysts. J Am Assoc Gynecol Laparosc. 1994; 1(4, part 2): 26.

Corresponding Author:
Aylin Pelin CIL
Guvenevler Ic Sok. No: 4/5
Asagi Ayranci, Ankara,
06540, TURKEY
E-mail: cilaylin@gmail.com