

## **The indications of surgical management of asymptomatic unilateral unilocular ovarian cysts in non-menopausal women**

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### **Abstract**

This study is a prospective study we follow - up (284) patients with a symptomatic unilateral , unilocular , ovarian cyst sized (3-8 ) cm in diameter in non menopausal women . The results were spontaneous regression after observation of two menstrual cycles , in (64.4) % of cases , with or without the use of oral contraceptives . The percentage of regression varied inversely with the size of adnexal mass , the persisted ones were (35.6) % they removed surgically and all were found benign in nature , the surgery was Laprotomy in 67 % and Laproscopy in 33 % In conclusion there is no harm in observation for a period of two menstrual cycles of a symptomatic unilocular ovarian cyst with a nechoic pattern and no sign of malignancy in non – menopausal women as there is (64.4) % spontaneous regression without the need of surgery.

### **Introduction**

Ovarian tumors may be functional, inflammatory, metaplastic, or neoplastic (Hacker & Moore,1998). During childbearing years, the majority of non-inflammatory ovarian tumors are functional, which needs only observation, because they will regress spontaneously with or without hormonal treatment following the next menstrual periods (Grimes & Hughes,1989,Rivilin,1986).On the contrary, other forms of ovarian tumors need surgical resection because they have a deleterious effect on the patient's health if left without treatment. In addition, the tumor cannot assume to be benign until proved so by surgical exploration and microscopic examination.

Since the introduction of ultrasonographic examination of the pelvic organs on a wide scale, and its consideration as part of the clinical examination of females with different gynaecological, obstetrical, and other complaints, a problem has been risen and that is how to deal with adnexal masses of different sizes and characters. In such cases difficult decisions have to be taken that may affect a woman's hormonal status, fertility, or presence of cancer. The aim of this study is to assess the outcome of expectant management of unilocular ovarian cysts sized 8 cm and less in-

non menopausal women after a period of two menstrual cycles with or without hormonal treatment and whether the size affects this outcome. In addition, the aim is to detect the histopathological outcome of the persistent unilocular ovarian cysts.

### **Material and methods**

In this study, two hundred and eighty four patients in whom ultrasonography revealed unilateral, mobile, unilocular, thin-walled ovarian cysts without internal echoes and of 3 cm but not exceeding 8 cm in diameter in non-menopausal women were enrolled into the study from March 2000 to September 2005. The patients were those who consulted the outpatient clinic at Azadi General Hospital, and private clinics. Pelvic ultrasonography was done due to specific complaints of pelvic pathology and for other unrelated complaints. These patients were divided into 6 groups according to the size of the unilocular ovarian cyst as appeared on ultrasound starting with a size of 3 cm and ends with 8 cm (Table 1).

The majority had observation with the additional treatment of a combined oral contraceptive pill for the next two menstrual cycles and a minority had only observation. If the cystic mass regressed, nothing further was required, and this confirmed that the lesion was a functional ovarian cyst. On the other hand if it persisted, surgical exploration laparoscopically or through laparotomy was done. Patients with cystic masses, which were multilocular or bilateral, or larger than 8 cm as appeared on ultrasonography, or associated with pain, or ascites and the cysts which were the result from induction of ovulation were all eliminated from the study.

### **Results**

In all, two hundred and eighty four women with unilocular ovarian cysts of 3-8 cm in diameter found in a pelvic ultrasound were prospectively recruited for the study. Their ages ranged between 16 and 47 years.

The number of such ovarian cysts that regressed after observation for two menstrual cycles, and usually with the prescription of an oral contraceptive pill, was 183 cases. Their spontaneous regression, which occurred in 64.4 %, confirmed their functional nature. The number of the remaining cases, which persisted after the period of observation, was 101 cases (35.6 %) (Table 2). These persisted cases required surgical removal of the mass so that it can be examined histologically. The 101 ovarian cysts which required surgical excision, were achieved either through traditional

laparotomy in 67% or through operative laparoscopy in 33% (Table 3).

Those patients who required surgical exploration revealed that the ovarian cysts were neoplasm in 58 cases, endometriosis in 23 cases, paraovarian cyst in 12 cases, and functional cyst in 8 cases (Table 4).

As noted before we had 58 cases of ovarian neoplasm. These were classified into major categories and subtypes, based on histological cell type and benign versus malignant state. Their distribution is shown in (table 5). From the observation of the data obtained from this study, it has been found that the size of the adnexal mass, in non-menopausal women is important in predicting the outcome of two menstrual cycle's observation. It showed that regression was high when ovarian cyst was small being highest (85.5%) when it was 3 cm, while the percentage of regression decreased with increase in its size being 0% when the ovarian cyst was the size of 8 cm (table 6).

## **Discussion**

The probe of ultrasonography has become the third finger of the gynaecologist. Due to this advent, one discovers more and more echographic images; the vast majority of them are functional cysts (Grimes & Hughes, 1989). In spite of this preponderancy of functional cysts, the remaining cases need to be diagnosed precisely and managed accordingly because if left may have deleterious effect on the patient. For this reason, it is difficult incorrect and illogical to propose surgical treatment to all these cases believing in the aphorism that such masses are malignant until proved otherwise. Therefore, every gynaecologist should have a sort of a protocol or guideline that allows him to exclude as many patients with functional cysts in whom unnecessary surgery would have been otherwise performed. In addition to this conservative policy, one should keep in mind that such masses should never be taken lightly. In fact, it poses one of the most important exclusion of every routine gynaecological examination.

Bearing these concepts in mind, any woman with such an adnexal mass is considered to have an ovarian cancer and should have an operation, except those women who are found to have a simple cyst with an anechoic pattern as visualized by ultrasound, size of 8 cm in diameter and less and who are ovulating or in early pregnancy. Such women can be followed conservatively and reexamined after two menstrual cycles. These women are said to have had a functional ovarian cyst if the cyst had regressed spontaneously or with the temporary use of oral contraceptive pill. In our

study, 64.4% of the unilocular ovarian cysts regressed and therefore were functional cysts. The percentage of regression varied inversely with the size of the ovarian cyst. It was 85% in simple cysts of 3 cm in diameter, and 0% in unilocular cysts size of 8 cm. Due to the small number of the 8 cm group of cysts (only two cases) in this study, it is not recommended to remove such cysts from the start because of its 0% regression unless other studies with significant numbers confirm this observation.

Still it is not well understood the usefulness of expectant management compared to hormonal suppression therapy in the facilitation of the disappearance of functional ovarian cysts. Some studies showed that oral contraceptive pill was used in the treatment of functional ovarian cysts and such cysts could be managed easily with it (Schindler,1994,Tanos & Schenker,1994,Fait et al.,2005). In fact, functional ovarian cysts are less common in women who have recently been taking the oral contraceptive pill (Vessey et al.,1987, Jensen & Speroff,2000). On the contrary, in other studies there was no statistical significant effect in the acceleration of the resolution of functional ovarian cysts, when hormonal treatment was compared with expectant management (Steinkampf et al.,1990,Turan et al.,1994).

After two menstrual cycle's observation, a laparoscopy or traditional laparotomy should be performed if a persistent cyst is observed because of the high probability of finding a pathological rather than a functional cyst. Persistent ovarian cysts have to be removed to exclude or diagnose a cancer. Laparoscopic surgery is technically feasible, safe, and advantageous, with minimal morbidity, and it should replace laparotomy in the management of most ovarian cysts (Mahdavi et al.,2004). It can often be used to surgically treat a patient, reducing the whole affair to an outpatient episode. In our study (33%) of the ovarian cysts that required surgical excision, were performed laparoscopically.

In the reproductive ages, the dividing line between a normal graffian follicle and functional cyst seems to be about 2 cm in diameter, less being a follicle, and more being a cyst. Ovarian cancer occurs more frequently with advancing age being 7/100000 in ages 20-44 years (Peterson,1997). From the observation in our study and other studies, simple unilocular cyst of 8 cm in diameter and less is usually a benign tumor (Berek). In fact, in our study, (67.3%) of such cysts were functional and the pathologies of the persisted ones were benign neoplastic in (57.4%), endometriosis in (22.8%), paraovarian cysts in (11.9%) and functional cysts in (7.9%). It is

reported that functional ovarian cyst removal rates range from 15 to (30%) (Doret & Raudrant,2001). Although it is impossible to reduce functional cyst removal rate to (0%) but one should evaluate this activity periodically and be able to limit this rate to less than (30%). The removal rate of functional ovarian cyst in our study was (7.9%), which is less than the reported figures in other studies, and one should continue to be careful in the management of simple unilocular ovarian cysts.

### **Conclusion**

In the management of simple ovarian uncomplicated cysts with an anechoic pattern as visualized on ultrasonography and with a size of 8 cm and less in women who are ovulating, there is no harm in observation for the next two menstrual cycles with or without the use of oral contraceptives. Most such cysts regress without the need of surgery. In our study (64.4%) regressed and (35.6%) persisted. Persisted ovarian cysts, required surgical exploration to exclude or diagnose cancer. The percentage of regression varied inversely with the size of the ovarian cyst, being 85% in simple cysts of 3 cm in diameter, while it was 0% in unilocular cysts size of 8 cm.

It is recommended to observe all simple uncomplicated ovarian cysts of size 8 cm and less in non-menopausal women for the next two menstrual cycles and excise them only if they persist.

### **References**

- Berek JS., (1975): Novak's Gynecology 12<sup>th</sup> edition.362p.
- Doret M. and Raudrant D.,(2001): Functional ovarian cysts and the need to remove them. European Journal of Obstetrics, Gynecology & Reproductive Biology.vol. 100,pp. 1-4.
- Fait T., Nouzova K., Sykorova P., Fanta M, Vrablik M, and Skrenkova J., (2005): Benefits and risk of the modern combined hormonal contraception.Casopis Lekarů Ceskych.vol.144,pp. 238-44.
- Grimes DA. and Hughes JM., (1989): Use of multiphasic oral contraceptives and hospitalizations of women with functional ovarian cysts in the United States. Obstetrics & Gynecology.vol. 73, pp. 1037-9.

- Hacker, NF. and Moore JG., (1998): Benign tumors of the ovaries. Essential of obstetrics & gynecology. 3<sup>rd</sup> edition. W.B. Saunders Company. Pennsylvania USA. 421p.
- Jensen, JT. and Speroff, L., (2000): Health benefits of oral contraceptives. Obstetrics & Gynecology Clinics of North America. Vol.27, pp. 705-21.
- Mahdavi, A., Berker B. Nezhad C., Nezhad F., and Nezhad C., (2004): Laparoscopic management of ovarian cysts. Obstetrics & Gynecology Clinics of North America., vol. 31, pp. 581-92.
- Peterson, CM., (1997): Human Reproduction: Clinical, Pathological and Pharmacological Correlations.
- Rivilin, ME., (1986): Benign ovarian neoplasm. Manual of clinical problems in obstetrics & gynecology. 2<sup>nd</sup> edition.
- Schindler, AE., (1994): Drug therapy of ovarian cysts. Zentralblatt fur Gynakologie. Vol. 116, pp. 619-21.
- Steinkampf, MP., Hammond, KR., and Blackwell, RE., (1990): Hormonal treatment of functional ovarian cysts: a randomized, prospective study. Fertility & Sterility. Vol. 54, pp. 775-7.
- Tanos, V. and Schenker, JG., (1994): Ovarian cysts: a clinical dilemma. Gynecological Endocrinology. vol. 8, pp. 59-67.
- Turan, C., Zorlu, CG., Ugur, M., Ozcan, T., Kaleli, B., and Gokmen, O., (1994): Expectant management of functional ovarian cysts: an alternative to hormonal therapy. International Journal of Gynaecology & Obstetrics. Vol. 47, pp. 257-60.
- Vessey, M., Metcalfe, A., Wells, C., McPherson, K., Westhoff, C., and Yeates, D., (1987): Ovarian neoplasms, functional ovarian cysts, and oral contraceptives. British Medical Journal Clinical Research Ed. Vol.294, pp. 1518-20.

Table 1: Shows classification of different ovarian cysts according to their size in non-menopausal women.

Size of ovarian cyst	Management
3 cm	Observe for 2 menstrual cycles
4 cm	Observe for 2 menstrual cycles
5 cm	Observe for 2 menstrual cycles
6 cm	Observe for 2 menstrual cycles
7 cm	Observe for 2 menstrual cycles
8 cm	Observe for 2 menstrual cycles

Table 2: Shows outcome of patients in non-menopausal women, with unilocular ovarian cyst observed for two menstrual cycles.

Outcome of observation	Number	Percentage
Regressed	183	64.4 %
Persisted "not regressed"	101	35.6 %
Total	284	100 %

Table 3: Shows the number and percentage of the surgical procedure for excision of the ovarian cysts.

Surgical Procedure	Number	Percentage
Laparotomy	68	67%
Laparoscopy	33	33%
Total	101	100%

Table 4: Shows type of resected ovarian cyst in 101 patients

Type of adnexal mass	Number	Percentage
Ovarian neoplasm	58	57.4 %
• Benign epithelial	54	93.1 %
• Benign teratoma	4	6.9 %
• Malignant epithelial	0	0 %
Endometriosis	23	22.8 %
Paraovarian cyst	12	11.9 %
Functional	8	7.9
Total	101	100 %

Table 5: Shows the number and percentage of tumor cell type of origin and its malignancy in the 58 resected ovarian neoplasms.

Tumor cell type of origin and its malignancy		Number	Percentage	
Epithelial tumors	Benign tumors	Serous cystadenoma	41	70.7 %
		Mucinous cystadenoma	13	22.4 %
	Malignant tumors		0	0%
Germ cell tumors	Dermoid		4	6.9 %
Total		58	100 %	

Table 6: Shows the relationship between the size of ovarian cyst and outcome of two menstrual cycles observation.

Size of adnexal mass	Total Number	Regressed		Persisted	
		No.	%	No.	%
3 cm unilocular	62	53	85.5 %	9	14.5 %
4 cm unilocular	58	48	82.8 %	10	17.2 %
5 cm unilocular	137	79	57.7 %	58	42.3 %
6 cm unilocular	17	2	11.8 %	15	88.2 %
7 cm unilocular	8	1	12.5 %	7	87.5 %
8 cm unilocular	2	0	0 %	2	100 %
Total	284	183	64.4 %	101	35.6 %



## كيس المبيض بتجوييف أحادي عند النساء قبل سن اليأس وهل هناك حاجة الى استأصاله ومتى ؟

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### الخلاصة

تضمن هذا البحث معالجة كيس المبيض الأحادي عند النساء قبل سن اليأس ، حيث تم متابعة (٢٨٤) حالة للنساء اللاتي يتراوح قطر كيس المبيض عندهن (٣-٨ ) سم وكانت النتائج اختفاء كيس المبيض بعد المتابعة لدورتين حيضيتين عند (٦٤,٤ %) مع او بدون استخدام موانع الحمل الفموية ، وكانت نسبة الاختفاء عكسية مع قطر الكيس ، اما النسبة المتبقية والتي هي (٣٥,٦ %) تم معالجتهم جراحيا" بطريقة فتح البطن او الناظور الجراحي وكانت النتيجة بعد الفحص النسيجي لهذه الأكياس بأنها أورام حميدة نستنتج من هذا البحث ليس هناك أي ضرر من متابعة حالات كيس المبيض الأحادي لدورتين حيضيتين دون تدخل جراحي لان نسبة الاختفاء التلقائي فيها عالية