

The role of ultrasound in detection of ovarian cysts confirmed by histopathology

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(Ann Coll Med Mosul 2018; 40 (2): 59-62).

Received: 24th Jun. 2018; Accepted: 9th Sep. 2018.

ABSTRACT

Objective: The aim is to diagnose the ovarian cyst by ultrasound modality and confirmed this by histopathologic results.

Methods: Aprospective study on one hundred and fifty female patients in the period of one year (2009) in gyne-and obstetrical out patent clink.

Results: The patients examined and (150), ninty of these patient (60%) have ovarian cysts. (48) patient 53%. Their cyst resolved completely while (42) patient 47% are not respond to medical treatment and need surgical interference and these cyst are exposed to the histopathological assessment.

Conclusion: Sonography of the pelvic organs to detect ovarian cyst is a good imaging modality, quick and safe procedure, need no much preparation and easily predict the nature and type of the cyst and very easy methods to follow these patients.

Keywords: Ovarian cysts, Sonography.

دور الأمواج فوق الصوتية في تحديد الأكياس المبيضية المثبتة بالفحوص النسيجية

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قسم الأشعة، مستشفى ابن سينا التعليمي، الموصل، العراق

الخلاصة

الأهداف: يعد الفحص بالأمواج فوق الصوتية من أحدث وأهم الاساليب المستخدمة في فحص الأكياس المبيضية في الجهاز التناسلي الانثوي، وله القابلية على تصنيف هذه الأكياس الى أكياس غير ورمية وأكياس ورمية، وبيان مدى قابلية الفحص باستخدام الأمواج فوق الصوتية من تمييز الأورام الخبيثة ومقارنتها بنتيجة الفحص النسيجي. إن الهدف من الدراسة هو معرفة التغيرات النسيجية لتلك الاكياس ومدى إنتشارها في محافظة نينوى.

طريقة العمل: تناولت الدراسة (١٥٠) مريضة راجعت قسم النسائية والتوليد في مستشفى (البتول التعليمي للولادة) تتراوح أعمارهم (١٤ - ٦٩ سنة) وكان منهم ٩٠ مريضة (٦٠%) لديهم أكياس مبيضية من هؤلاء ٤٨ مريضة (٥٣%) إستجابت للعلاج الطبي وتم متابعتهم باستخدام فحص الموجات فوق الصوتية و٤٢ مريضة (٤٧%) إحتجن إلى تدخل جراحي وتم فحص العينات نسيجياً.

النتائج: أظهرت النتائج أنّ أكثر الأكياس المبيضية شوهدت في الفئة العمرية (٣٠ - ٤٠) سنة أكثر من بقية الفئات العمرية وأكثر الأكياس حدوثاً في المبيض الأيمن وعدد الأكياس المنفردة أكثر من عدد الأكياس المتعددة ونسيجياً وعدد الأكياس الحوصلية أكثر من عدد أكياس الجسم الأصفر وأنّ عدد الأكياس الناضجة أكثر من الأكياس المصلية والمخاطية والحبيبية على التوالي.

الاستنتاجات: تبين من الدراسة وجود أنواع متعددة من الأكياس المبيضية، فمن الضروري إجراء الفحوصات باستخدام الفحص بالأمواج فوق الصوتية عالي الكفاءة مع فحص الدوبلر، كما أنه من الضروري إرسال المرضى الى الفحص باستخدام الفحص المقطعي والفحص بالرنين المغناطيسي للتشخيص بدقة ومعرفة نوع الأكياس المبيضية قبل الشروع في إجراء العمليات الجراحية، كما أنه من الضروري إجراء الفحوصات المخبرية والدراسة النسيجية والمناعية لمنع حدوث أية مضاعفات.

INTRODUCTION

The ovarian cyst is fluid filled sac it can be noted as physiological cyst seen in menstrual cycle, or can be an growth benign or malignant cyst. They can be single cyst or poly cystic cyst.¹

The functional ovarian cyst usually cause no symptoms and found incidentally on physical and imaging studies. These cyst are called follicular cyst and may rupture spontaneously.²

Polycystic ovaries is an endocrine disorder effect 5% of women in the reproductive age.³

Benign ovarian cyst account for 15-20% of ovarian neoplasm. Teratogenic and dermoid cysts are most common type of these benign tumour.⁴

Malignant ovarian tumor are one of the common malignancies all over the world. Most of them are asymptomatic till they have metastasized.⁵

Complicated Ovarian cyst can be presented in different way's, like, torsion, hemorrhage, rupture and infection.⁶

Sonography is the modality of choice in the evaluation of these cysts either through abdominal or transvaginal approach.⁷

Doppler Us is helpful for more details about the vascularity of the cyst and a risk of being malignant; because it shows clearly the vascularity of the cysts. In malignant ovarian cyst then will be abnormal vessels with a lower impedance of blood flow.⁸

PATIENT AND METHOD

A prospective study on one hundred and fifty female patients in a period of one year (2009) in Gyne obstetrical outpatient clinic. The age of the patients range from (14- 69) year, the mean age is (41) year.

These patient examined by Philips Enviser H. D. 2009 Us machine using curved. Us probe 3.5 MHZs.

The patient were examined with full bladder, lying supine and abdominal Us is done and the results is Labeled. The Information's of the cyst are measured including the diameter, number, and there site too. Doppler Us is done and the sign of malignancy is fixed.

RESULT

The most frequent age group distribution for ovarian cyst is at (30-40) years. (Table 1)

From the (150) patient's examined (90) patients (60%) have ovarian cyst of these patients who have the cyst are followed by repeated us examination during medical treatment (48 patient, 53%) their cysts resolves completely, while (42 patients, 47%) not responds to medical treatment, and need Surgical Interference, and these cysts exposed to histopathological assessment. (Table 2) The distribution of the cysts and there sonographic features seen in Table (3, 4) and Fig. (1, 2).

Table 1. Patient distribution according to age.

Age (Years)	No. patient	% out of 90 pat
10-19	08	8.8
20-20	17	19.0
30-39	28	31.1
40-49	18	20.0
50-59	14	15.5
60-69	05	5.6
Total	90	100

Table 2. Number of patients with a resolved ovarian cysts by medical treatment compared to those resolved surgically and other cases.

Type of cyst	No of patient	% out of 90 pt
Ovarian cyst resolved by medical treatment	48	53
Ovarian cyst resolved by surg	42	47
Total	90	100

Table 3. Distribution of the cyst.

Side	No of patient	% out of 90 pt
Right	61	67.7
Left	29	32.1
Total	90	100

Table 4. Ultrasonic features of ovarian cyst (90) patient.

Us. Finding	No of cyst
An echoic cyst	55
Solid echoic	7
Mixed echogenicity	18
With Septation	10
Total	90

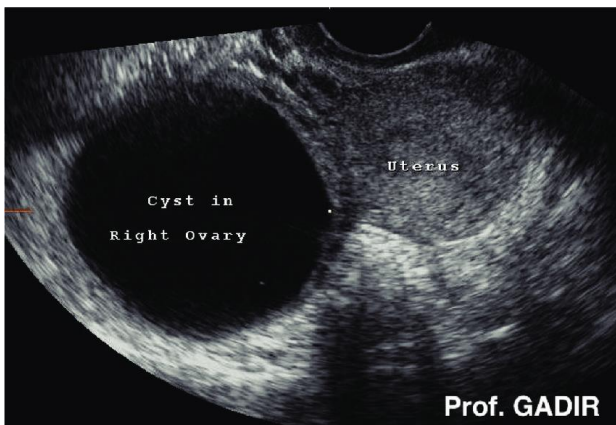


Figure 1. Ultrasonic pictures of different types of ovarian cysts.

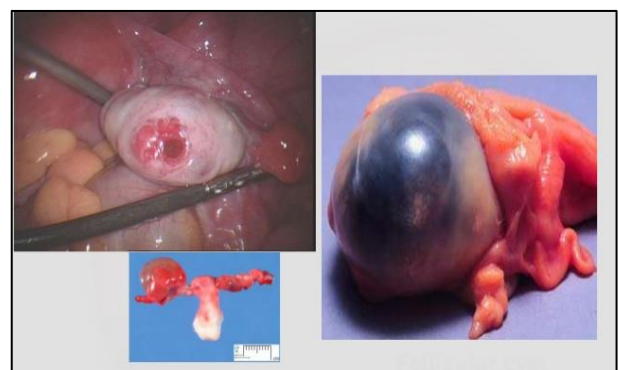
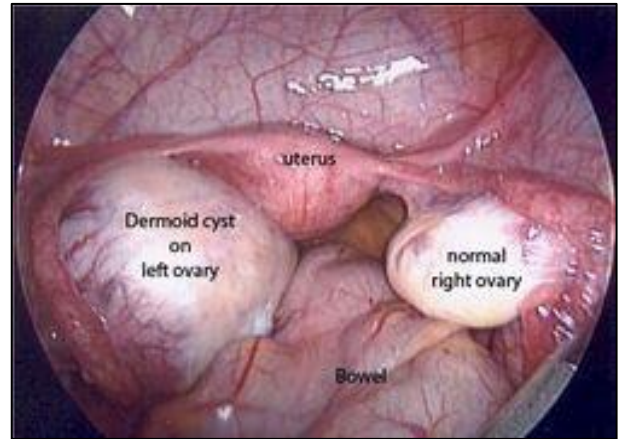


Figure 2. Ovarian cysts with their post-operative gross appearance.

DISCUSSION

Simple ovarian cyst can occur at the reproductive period.⁹ Malignant ovarian cysts are one of the major health problem which can present either symptomatic, or may be of vague symptoms or present with complication.

In this study most of the ovarian cyst are in the 4th decade of age, this result is in agreement with other studies as Tushar, k. *et al* 2005 found that the mean age for ovarian mass is 43 years¹⁰.

Regarding the distribution of the cysts, most cysts seen in this study are in the right ovary, and

this fact was suggested by Ismail R. (2005) who found that the configuration of sigmoid colon which is curved (S) shaped, and the presence of the appendix in the right side facilitate for development of right ovarian cyst.¹¹

In this study the cyst which shows mixed sonogenicity and septated cyst proved in histopathology to be malignant cyst this result is in agreement with Valentine L. (2005) Series.¹²

The most common histological type of benign ovarian tumors in this study is serous cyst adenoma, and teratoma.

The overall sonographic sensitivity in diagnosing ovarian cyst was 88% and sepecificity of (96%).

CONCLUSION

Sonography of the pelvic organ's to detect ovarian cyst is a good imaging modality, it is quick, safe, and applicable at any time, need no much preparation and easily predict the nature and type of the cyst and very easy modality for following the patient.

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