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Ovarian Tumors In Statistic

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Abstract

This study was done to give an idea about ovarian tumors in Hilla city on the statistical back ground.

Objective

The objective of this study is to shed more light on ovarian tumors in Hilla city, its histopathological types ,risk factors and age distribution.

The results were as follow:

1. 184/200 case were benign, 3/200 were border line and 13/200 were malignant.
2. 137/200 case were surface epithelial tumor,56/200case were germ cell tumor and7/200 case were stromal tumor.
3. The most common subtype of surface epithelial tumor was serous that form 59.5% from all benign and malignant ovarian tumors in Babylon city.
4. The age of patients with benign tumors were 10-70 year and malignant tumors were 26-60 year and for germ cell tumors were10-42 year.
5. 96.5% of the cases had unilateral ovarian tumor and only 3.5% of the cases had bilateral ovarian tumor.
6. The size of tumor vary from 1-30 cm for both benign and malignant tumors.

الخلاصة

تم اجراء هذا البحث لغرض تسليط الضوءعلى اورام المبايض في محافظة بابل ومعرفة اكثر انواعها شيوعاومدى الاعمار التـي تصاب بهذه الاورام فكانت النتائج كما يلي:

1- 200/184حالة كانت مصابة باورام حميدة و200/13.حا لةكانت مصابة باورام خبيثة

2- بالنسبة للتصنيف النسيجي لهذه الاورام كانت النتائج كالاتي:

200/137 اورام طلائية سطحية،200/56 اورام الخلايا الجرثومية ،200/7 الاورام الساندة

3- بالنسبة للاورام الطلائية السطحية،اكثر انواعها هو serous وهو اكثر انواع الاورام عموما اذ بلغت نسبته59.5% من مجموع اورام المبايض الحميدة والخبيثه في محافظة بابل.

4- معدل اعمار المصابات بالاورام الحميدة هو 10-70 سنة وبالاورام الخبيثة هو 26-60 سنة فيما عدا اورام الخلايا الجرثومية فان معدل اعمار المصابات هو 10-42 سنة.

5- 96.5% من الاورام اصاب احد المبايض و 3.5% اصاب المبيضين معا

6- حجم اورام المبايض تباين من 1-30 سم سواء كان الورم حميدا ام خبيثا.

Introduction

Ovarian cancer is potentially life threating malignancy that develop in one or both ovaries.

WHO classification of ovarian tumors(1993) is as follows: (Robins and Cotran, 2004).

1.Epithelial tumors

Account for up to 90% of all ovarian tumors and therefore are the primary focus of this report, these tumors develop from a layer of cells that cover the outer surface of the ovaries.(Beral, 2007; Bristow *et al.*, 2007; Goff *et al.*, 2007)

Surface epithelial tumors are classified according to cell type into: serous, mucinous, endometroid, clear cell and transitional cell tumor, and according to cellular atypia and invasiveness into benign, border line and malignant.(B ell, 1991).

Border line ovarian tumors are referred to because their appearance and behavior under microscope is between benign and malignant. (Beral, 2007; Bristow *et al.*, 2007; Goff *et al.,* 2007)

2.Germ cell tumors

Account for about 3% of all ovarian tumors ,these are develop from egg maturation cells of the ovaries,they occur most often in teenagers and young women . (Beral, 2007; Bristow *et al.,* 2007; Goff *et al.,* 2007)

It include mature and immature cyctic teratoma, dysgerminoma, yolk sac tumor, emberyonal CA and chorio CA.

3.Stromal tumors:

Which account for 6% of all ovarian tumors, they develop from connective tissue cells that hold the ovary together and produce the female ovarian hormones, estrogen and progesterone,it include granulosa cell tumor, thecoma ,fibroma and sertoli-leydig cell tumor .(Beral, 2007; Bristow *et al.,* 2007; Goff *et al.,* 2007)

4.Malignant not other wise specified.

5.Metastatic non ovarian tumors.

There are several factors associated with a high risk of developing ovarian tumors, the most important is having a family history of ovarian, breast and colorectal cancer ,especially first degree relatives, women who never have had children, taking fertility drugs, androgen and male hormones and having inherited mutation of certain genes (named BRCA1 and BRCA2) all increase the risk of developing of ovarian tumors.

The risk of developing ovarian tumors get higher with age and its rare before age of 40 (this only for epithelial tumors) .

Taking birth control pills for three years or more ,tubal ligation and hysterectomy especially after child bearing are associated with lower risk of developing ovarian tumors. .(Beral, 2007; Bristow *et al.,* 2007; Goff *et al.,* 2007)

Material and methods

A retrospective study of 200 case of ovarian tumors collected from histo pathological department in Hilla teaching hospital and from privid lab in the city ,the cases collected in the period from January 2006 to January 2008 ,the data collected as follows ,age ,size of tumor, histopathological type of tumor, unilateral or bilateral.

The biobsies are formalin fixed. paraffin embedded and stained by Heamatoxyline and Eosin and studied histopathologically.

We use chi –square (x) test to analysis our data.

Results

200 cases of histologically proven ovarian tumors were studied , statistical analysis showed that 184/200 (92%) were benign ,3/200 (1.5%) were borderline and 13/200 (6.5%)were malignant .(there is significant difference between the frequency of various ovarian tumors)($p<0.01$).

In regard to histological type of tumors,137/200 (68.5%)were surface epithelial tumors ,56/200 (28%) were germ cell tumors and 7/200 (3.5%) were stromal tumors.(there is significant difference between the frequency of various histological types of ovarian tumors).($p<0.01$).

In regard to surface epithelial tumor,131/137 (96.1%) were benign,3/137 (2.1%) were borderline and 3/137 (2.1%) were malignant. (most of the surfaces epithelial tumors are benign)($p<0.01$).

In concern to subtypes of surface epithelial tumors ,serous tumors were 119/200 (59.5%)of all ovarian tumors while mucinous tumor were 18/200 (9%) of all ovarian tumors (most of the surface epithelial tumors are of serous subtypes).

From all serous tumors there were 2/119 (1.6%) malignant and 117/119(98.4%) were benign,while for mucinous tumors there were 14/18(77.7%) benign and 3/18(16.6%) were border line and there was only 1/18(5.5%) malignant.

In concern to germ cell tumors 50/56 (89.2%) were benign which are all of mature teratoma type and only 6/56 (10.8%) were malignant which were as followed: 2 case dysgerminoma,1case immature teratoma,1 case yolk sac tumor,1 case chorio carcinoma and 1 case emberyonal carcinoma.

In regard to stromal tumors 3/7(42.8%) were benign (all are of fibroma/thecoma subtype) and 4/7(57.1%) were malignant(all of granulosa tumor subtype).

Benign tumors range in age from 10-70 year ,peak age of incidence was at 20-30 year age interval where 64 (38%) case were found ,at age interval 20-40 year,119 (64.6%) case were found .

Malignant tumors range in age from 26-60 year, while for germ cell tumors whether benign or malignant, the age of the patients range from 10-42 year.

In concern to incidence of bilaterality,193/200 (96.5%) had unilateral ovarian tumors and only 7/200 (3.5%) had bilateral ovarian tumor.(there is significant difference between no. of cases with unilateral and bilateral tumor)($p<0.01$).

In regard to the size of tumor, we found that both benign and malignant tumors varies In size from 1 cm to reach huge size up to 30 cm in diameter.

Discussion

The result of current study showed that 92% of cases were benign ,1.5% were borderline and 6.5% were malignant ovarian tumors ,these results are similar to that of other study.(Beral, 2007).

In concern to histological type of tumor,68.5% of cases were of surface epithelial tumors ,28%0f cases were germ cell tumor and 3.5% were stromal tumor,these results are similar to other study only for surface epithelial tumors where its percentage is 65-70% while for germ cell tumors ,its higher than other study where its percentage is 15-20% and its lower for stromal tumor where its percentage is 5-10%. (Robins and Cotran, 2004).

In regard to surface epithelial tumors subtypes ,serous tumors form 59.5% of all ovarian tumors while mucinous tumors form 9% of all ovarian tumors ,1.6% of all serous tumors were malignant and 5.5% of all mucinous tumors were malignant ,these results differ from other studies were serous tumors form 30% of all ovarian tumors and 25% of them were malignant ,while for mucinous tumor ,these form 25% of all ovarian tumors and 15% of them were malignant.(Robins and Cotran, 2004).

In regard to germ cell tumor,89.2% were benign and all are mature teratoma,this resultis similar to other study were approximately 95%of germ cell tumors are mature teratoma.(Hawkins, 1998)

In concern to age ,64.6% of benign tumors present at 20-40year age interval which is in agreement with other studies. (Robins and Cotran, 2004).,while for malignant tumors the age range from 26-60 year which is in agreement with other studies where malignant tumors are common in women between the age of 40 -65 year. (Robins and Cotran, 2004)., also for germ cell tumor ,the age of patients range from 10-42 year which is similar to other studies where germ cell tumor are seen mainly in children and young adults. (Robins and Cotran, 2004).

The percentage of bilaterality in this study was only 3.5% which is less than other studies regarding all types of ovarian tumors whether benign or malignant. (Robins and Cotran, 2004).

In regard to size of tumor, we found that both benign and malignant tumors are of variable size(there is no significant relation between size and type of tumor whether benign or malignant).

Recommendation

There is no reliable routine screening tests for ovarian tumors ,nor does it manifest any distinguishing symptoms,making it difficult to detect early .

There are non specific life style factors that are proven to protect against ovarian tumors these include eat a diet rich in vegetable ,tea consumption ,also factors that limit stimulation of ovaries or inhibit ovulation appear to be protective ,these factors include pregnancy ,breast feeding and using of oral contraceptive pills.(Lacey *et al.,* 2006; Goff *et al.,* 2007; Smyth *et al.,* 2007).

Surgical preventive stratigies like tubal ligation and bilateral oophorectomy are significantly reduce the risk of ovarin tumors.(Lacey *et al.,* 2006; Goff *et al.,* 2007; Smyth *et al.,* 2007).

Screening of high risk women for detection genetic mutation in the BRCA1 and BRCA2 genes and for heridetory non polyposis colorectal cancer (genetic councelling). (Lacey *et al.,* 2006; Goff *et al.,* 2007; Smyth *et al.,* 2007)

If cancer cant be prevented ,the next best thing is early detection by regular check up and performing self examination.

Check up is by PAP test,colonoscopy, biopsy and tumor marker blood tests. (Lacey *et al.,* 2006; Goff *et al.,* 2007; Smyth *et al.,* 2007)

Ovarian tumors are common gyneacological tumor in Hilla city ,it was the second gyneacological tumor in Hilla city second to tumor of uterus,cervix and placenta (Al-Timimi &Al-Alwachi, 2005) , serous tumors are the most common type(59.5%).

The insidious onset of disease make it to be detected after had been already spread to other areas of the body ,so its prevention and early detection are important to decrease its frequency and decrease the death rate from ovarian tumors.

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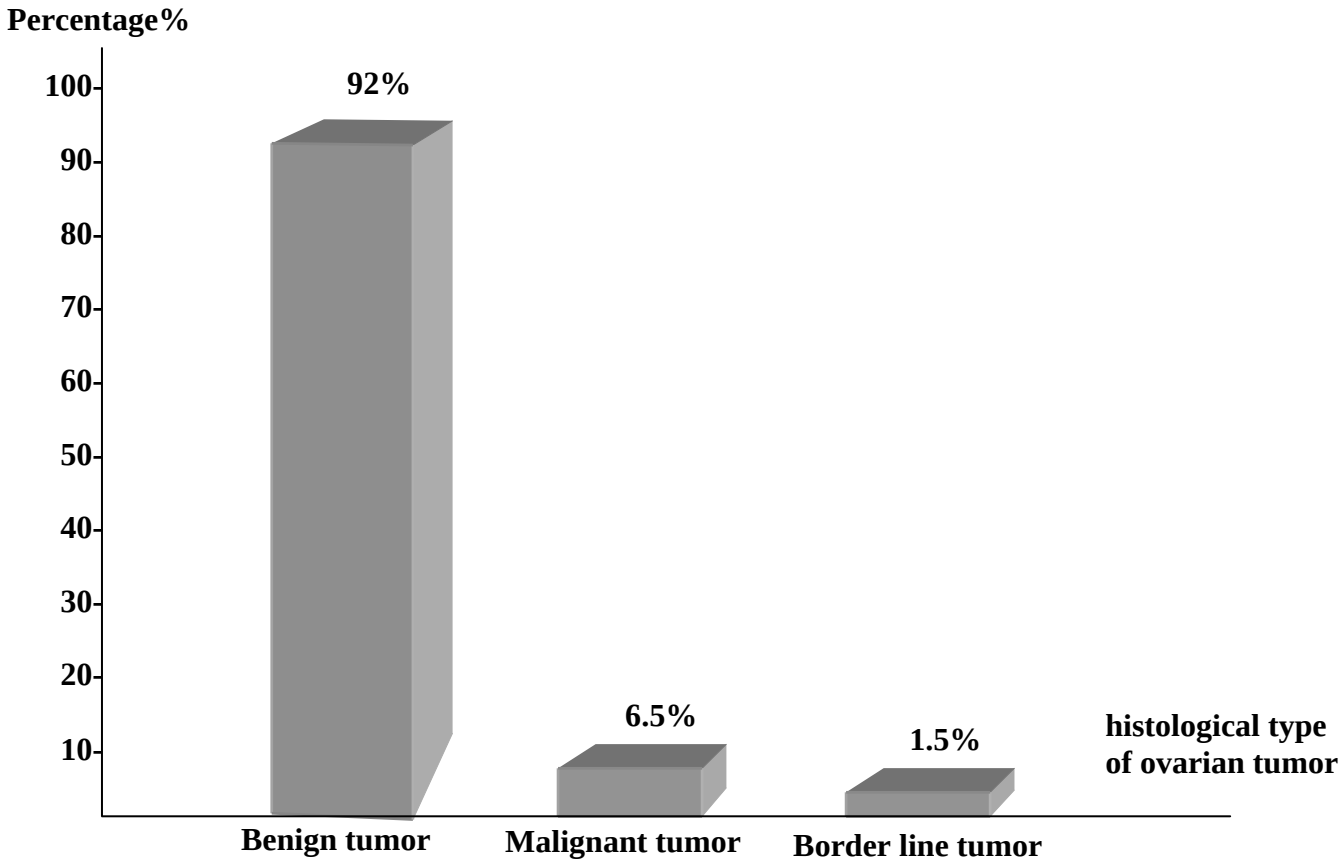
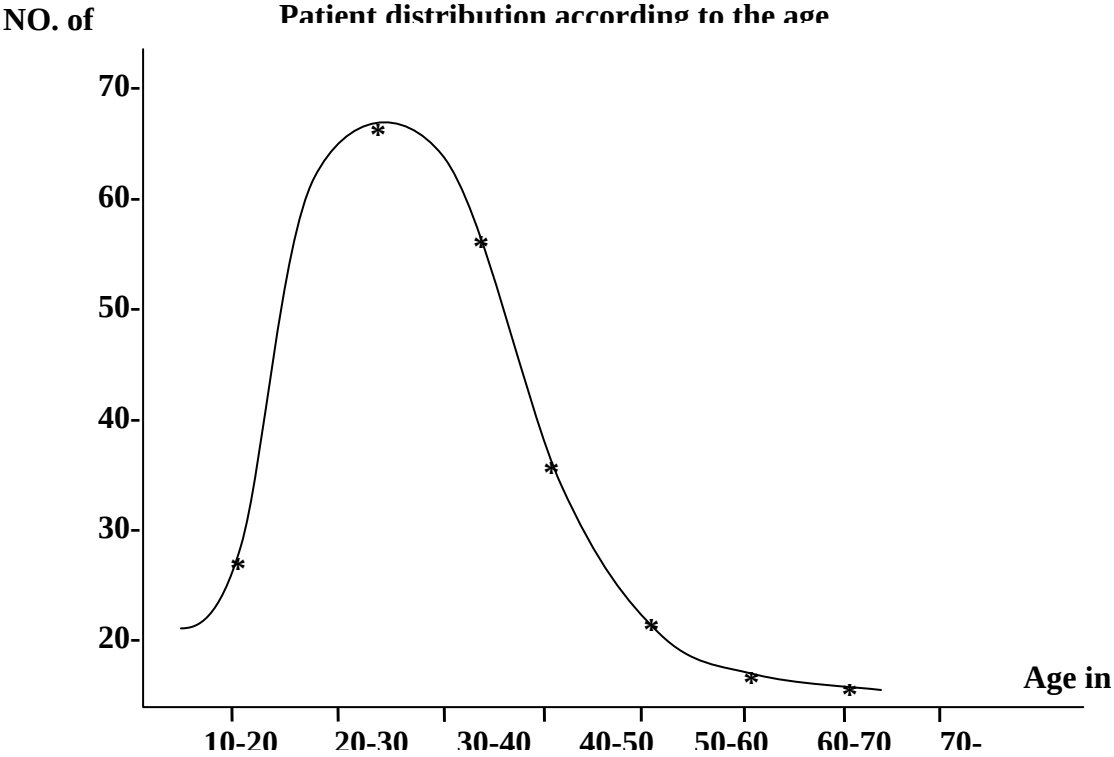


(Figure NO.1)
Frequency of various histological type of ovarian tumor in 200 patient

(Figure NO.2)
Patient distribution according to the age



(Figure NO.3)
Patient distribution according to histopathological type of ovarian tumor.