ORIGINAL ARTICLE

Prospective Study of Ovarian Tumors Clinical Pattern and their Management at Lady Willingdon Hospital, Lahore

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ABSTRACT

This was prospective study done at lady willing don Hospital affiliated with king Edward Medical university from 1st January 2008 to 31st December 2008 .The main objective was to analyze various risk factors, clinical pattern and management aspect of ovarian tumors. Total 80 cases were included and tumors with pregnancy and recurrent in origin were excluded. Most of malignant tumors were seen after age of 50 yrs 82% in different ages while the benign were seen in reproductive age before 40-yrs73.7%. In both groups tumors were common in multipara women but significant numbers of malignancy were in unmarried and nulliparous women The commonest symptom was pain in abdomen 81.2% while epithelial tumors accounts for 72.5% in origin The tumors are difficult to manage due to advance stage. 60% of ovarian cancer were managed by debulking surgery while only 15 % were treated by primary surgery. Most of benign tumors were treated with conservative fertility sparing surgery

Key words: Ovarian tumour, fertility, malignancy

INTRODUCTION

The ovarian tumors are the most commonest tumors in the female population. The feeling of tumor is a fearsome but the majority of them are not malignant. Among all admitted patients with the diagnosis of ovarian tumors, the ovarian malignancy is ranged from 13-21%[1]. The most important predictor of malignancy is the age of the patient. The risk of malignancy in ovarian tumors increases 12 fold from the ages 12-29 years to 60-69 years[2].

Ovarian cancer is the sixth leading cause of deaths among the cancer and 7th most frequent site in women in developed world. In Pakistan it is the 2nd most common cause of death in female malignancies after breast tumors[3]. High incidence is found in North America and Europe (UK, Nordic countries) as compared to Japanese[6].

There are numbers of risks factors associated with their origin. None of these has been yet proved except for age and parity. Most of the tumors are sporadic but 5% are familial. The early diagnosis is not possible due to lake of effective screening program for high-risk population. More than 75 % of the patients are diagnosed with advance stage (stage1v, 111). The overall survival of ovarian cancer is 48.4% but ranges from 89.9% for patients with stage 1A disease to only 16.8% for patients stage 1V disease[7]. They management of ovarian tumors is difficult and require complex therapies. It has high fatality-to-case ratio of all the gynecological malignancies. The women risk at birth of having ovarian cancer some time in her life is nearly 1.5% and that of dying from cancer is almost 1%[8].

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MATERIALS AND METHODS

Total 80 cases with the provisional diagnosis of ovarian tumors were managed in the Department of Obstetrics & Gynaecology, KEMU/ Lady Willingdon Hospital affiliated with king Edward Medical University Lahore from 1st January 2009 to 31st December 2009. Careful history taking, clinical examination, routine investigations, Doppler ultrasound. tumors markers, CAT scan, and MRI were carried out. All findings were recorded on Performa. Written consent was taken. Ovarian tumors in pregnancy and recurrent tumors were excluded from the study. All patients were managed by laparotomy (primary surgery TAH + BSO, cystectomy, debulking,). No patient was subjected to chemotherapy prior to surgical staging. Laparotomy finding were recorded like consistency, size, unilateral/ bilateral, and secondaries. Data was analyzed by percentage, Z test, and chess square test

RESULTS

Table 1 depicts the age wise pattern. Out of 80 cases 62.5% were malignant across all age groups while 37.5% were benign. The benign tumors were at the age 40 yrs (reproductive age) 66.6 %. While the malignant were at the peak after 50 yrs (60%)

menopausal age the youngest patient was 18 yrs old while the oldest was 73 yrs.

Table 2 depicts that overall ovarian tumors are common in multiparous women 58.15% while in nulliparous and unmarried women they were 22.5%. Out of 80 cases the majority of cancers were in multiparous 62% while benign tumors were in Para 1 to 3 (53.4%)

Table no=3 gives the symptoms and signs of ovarian tumors. The most common symptoms were pain in lower abdomen 81.2% followed by mass in lower abdomen 60%. The non-specific symptoms were quite common 27.5%

Table 4 depicts histopathology of ovarian tumors. Out of 30 benign tumors 7(23.3%) were simple cysts. The commonest tumors were epithelial in origin (72.5%) in which the serous type was 42.5%. The Germ cell were 15 %, the sex cord stromal tumors were only 3.75%

Table 1: Age wise pattern

Age	Benign (n=30)	Malignant (n=50)	Z value	P value
< 20 yrs	2(6.7%)	1(2%)	0.46	0.32
21- 40 yrs	20(67%)	8(16%)	0.35	0.00007
41- 50yrs	5(16.7%)	11(22%)	0.29	0.386
51- 60yrs	3(10%)	20(40%)	0.62	0.004
> 60 yrs	0	10(20%)	0.27	0.04
Total	30(100%)	50(100%)		

Table 2: Parity wise pattern

Parity	Benign (n=30)	Malignant (n=50)	Z value	P value
Unmarried	3(10%)	4(8%)	0.10	0.459
Nulliparous	4(13.3%)	5(10%)	0.09	0.463
Para 1- 3	7(23.3%)	10(20%)	0.07	0.471
Multipart	16(53.4%)	31(62%)	0.53	0.298
Total	30(100%)	50(100%)		

Table 3: Symptoms wise presentation

Symptoms	Total cases (n= 80)
Pain in lower abdomen	65(81.2%)
Mass lower abdomen	48(60%)
Abdominal distension	28 (35%)
Non-specific like fever, weight	-
Loss, anorexia	22(27.5%)
Irregular bleeding	4 9(17.5%)

Table 5 depicts the results of investigations. The majority of ovarian tumors were bilateral in distribution 55% while 45 % were unilateral. The most of malignant tumors were bilateral 72 % and had solid & cystic consistency 46 %. The benign tumors have mix consistency (40%). Ovarian cancer presented as huge lump 28 out of 50 cases at time of diagnosis. In most of malignant tumors CA 125 was raised above the cut of value 64 % while benign has low value 66. 6 5%.

Table 4: Histopathology

Histopathology	Benign (n=30)	Malignant (n= 50)
Simple cysts	7(23.3%)	0%
Epithelial Tumors	72.5%	18(60%)
A- serous	10 (55.6%)	28(56%)
B- mutinous	8 (44.6%)	10(20%)
C- endometriod	0	2(4%)
D- brewers	0	0
Germs cell tumors (15%)		
A – dermoid cyst	5(16.6%)	0
B-dysgerminoa	0	5(10%)
C- yolk sac	0	2(4%)
Sex cord stromal tumors (3.75%)		
A granulose cell	0	3(6%)
B- theca cell	0	0
Secondary tumors	-	-

Table 5: Investigations

Ultrasound/CT scan	benign(n=50)	Malignant (n=50)
Unilateral	22(73.3%)	14(28%)
Bilateral	8(26.7%)	36(72%)
Consistency		
Solid cystic	13 (43.4%)	23 (45%)
Cystic	12 940%)	10(20%)
Solid	5(16.6%)	17(34%)
Size		
5- 15 cm	12(40%)	22(44%)
More than 15 cm	18(60%)	28 (56%)
CA 125 level	-	-
> Than 30iu	8(26.7%)	32(64%)
< Than 30iu	20 (66.6%)	8(16%)
" Fetoprotein level	2(6.7%)	8(16%)
BhcG level	0	2(4%)

Table 6: Management Benign(n= 30)

Simple cysts	7	
Unilateral ovariotomy	TAH & BSO	
Malignant (n=50)	-	
Epithelial	1	
0 stage 1c	TAH & BSO	(C+P) 8
12 stage 111	Debulking	(C+P) 8*
18 stage 1v	Debulking	(C+ P) 8*
Germs cell tumors		
Dysgerminoma	5 stage1c	unilateral ovariotomy (C+etopside)
Yolk sac tumors	2 stage 2c	TAH & BSO (PEP-!)
Sex cord stomal tumors		
Granulose cell	3 stage 2c	TAH & BSO

Table 6 depicts the management and stage at laparotomy. 66.6% of benign tumors were treated by conservative fertility surgery where only 5 patients in malignant were treated in same way. Most of malignant

DISCUSSION

Ovarian tumors always present with wide spectrum of clinical, morphological and histological features. The majority of them are diagnosed at advance stage the survival rates have hardly improved since the three decades[10]. Ovarian cancer is a disease of peri and postmenopausal women. The peak incidence is in 5th and 6th decades of life as seen in our study (62.5%). The benign tumors are at peak in reproductive life as seen in the study

The ovarian cancer is common in low parity and in infertile women probable due to incessant ovulation theory[11]. In national survey of ovarian cancer in USA (1982) 8.2% of infertile women had malignancy[12]. In our study in unmarried/infertile patients, it was 17.5% probably due to late marriages and age factor. The risk factors like, late menopause, use of fertility drugs, history of colorectal disease, family history and breast feeding showed no relation to ovarian tumors except for age and parity. The reason may be limited no, of cases but the family history is the significant factor (1st degree relative 4-5 % risk, two 1st degree relative 7% risk[13]. mentioned in literature.

The commonest symptom was pain in lower abdomen 82%, mass lower abdomen 60% and non-specific constitutional symtoms. The women who ignored their symptoms present in advance disease. The reported symptoms in literature are, pain in abdomen 58 %, 46 %, 57.14%[14,15,16], mass lower abdomen as 77%, 66 %, 50. 79 %[14,15,16] the most important were vague non-specific symptoms as seen in study 27.5%. This emphasis the need for patient and physician education for high suspicion of ovarian malignancy

The majority of tumors originate from surface epithelium as seen in the study (72% malignant, 60% benign). The commonest were serous, followed by mucinous and endmetriods. The germ cell tumors accounts only 1.5 % and sex cord tumors as 3.75% The same histopathologic pattern is seen in different other studies (serous 70%, 48 %, mutinous 25%, 36 %, germ cell tumors as 9.6%, 10.95%, 8%,) The most commonest benign tumor was dermoid cyst while in malignant it was dysgerminoma. The documented incidence of sex cord tumor is 5-8% of all ovarian tumors and it well correlate to study 3.75%, The size of the tumor is not important as compared to consistency and its distribution to predict malignancy. 60% of malignant tumors in the study were more than 15 cm; the same was true for benign tumors. The majority of malignant tumors were bilateral and having solid + cystic consistency.

The majority of ovarian tumors have raised CA 125 level .In ovarian cancer it is above the cutt of value 30 IU but its efficacy as screening test is limited. The 2nd most screening tool is ultrasound. Laframboise et al questioned their efficacy as screening test in 7 year based study; only 0.35 of patients had ovarian caner[17]. The recent novel approach is to see the serum protein pattern by mass spectrometry (SELDI-TOF) i.e. surface enhanced laser adsorption ionization time of flight, to distinguish eoplastic from non-euplastic disease in ovary[18].

The surgery has the corner stone in the management of ovarian tumors for staging, primary surgery, TAB + BSO, debunking and adjuvant chemotherapy[18]. All patients were managed in similar fashion the 60% malignant tumors debulking were done. Only 30% were managed by primary surgery so that the residual tumors became less than 1.5 cm .It increases the survival rate. Lymphadenectomy is still the controversial issue .No patient had add-back up / neoadjuvant therapy. This includes 3 cycles of chemotherapy followed by surgery and then 3 cycles as compared to conventional therapy of 6 cycles after surgery. It is found to be more effective. The limitation of study was that most of the patients failed for follow up after chemotherapy

CONCULSION

Ovarian tumors are the difficult clinical challenge to manage due to lake of early diagnosis. Despite improvement in surgery and chemotherapy, early stage disease may offer a real opportunity to reduce the mortality

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