



Clinical presentations of ovarian tumour: A study in a tertiary care hospital

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Abstract

Introduction: Relative frequency of ovarian tumor is different for western and Asian countries. Two third of ovarian tumors occur in the reproductive age group of women. Ovarian tumors are histogenetically varied and complex tumors spanning all age groups. They account for 30% of all gynaecologic cancers. In treating such cases proper knowledge regarding the features of ovarian tumour is very much essential.

Aim of the study: The aim of this study was to evaluate the clinical presentations of several patients with ovarian tumour.

Methods: This cross sectional prospective study was conducted at Inpatient department of Obstetrics and Gynaecology of Rajshahi Medical College Hospital during the period from January 2007 to December 2007). A total of 100 consecutive patients were included in this study. All the patients were clinically suspicious of diagnosed of ovarian tumour and also supported by ultra-sonogram and confirmed by laparotomy findings and histopathological findings.

Result: In this study out of 100 cases, 90% complained of lump in the lower abdomen, 60% complained of vague abdominal discomfort and occasional pain in the lower abdomen 15% complained of loss of appetite, features of dyspepsia, flatulence, 21% complained of loss of body weight, 12% complained of abnormal vaginal bleeding,. Anaemia was present clinically in 90% cases, mass were present in the abdomen in 90% cases, 13% had ascities, (Table IX). During abdominal palpation in 90% cases mass were found. Regarding consistency of the masses 71.11% mass were cystic, 17.77% were firm, 7.77% were solid, 3.33% were partly solid and partly cystic.

Conclusion: In the treatment of patients with ovarian tumor physicians should aware about the symptoms like lump in the lower abdomen, abdominal discomfort and occasional pain in the lower abdomen, loss of appetite & dyspepsia, flatulence, loss of body weight, abnormal vaginal bleeding, anaemia and ascities. For more specific findings we will recommend to conduct more studies with large sized sample.

Keywords: clinical presentations, ovarian tumour, ascities, gynaecology

1. Introduction

Relative frequency of ovarian tumor is different for western and Asian countries. Two third of ovarian tumors occur in the reproductive age group of women. Ovarian tumors are histogenetically varied and complex tumors spanning all age groups. They account for 30% of all gynaecologic cancers. Ovarian tumours are a group of neoplasm's affecting the ovary and have a diverse spectrum of features according to the particular tumour entity. They include benign, borderline malignant and malignant subtypes ^[1]. Malignant ovarian tumour is the 5th most common cancer and 5th most frequent cause of cancer death, constitute 7.5% of all gynaecological malignancies and 3.5% of all cancer in women ^[2]. Ovarian malignancy is the second most common cancer of the female reproductive system and the leading cause of death from gynecologic malignancy ^[3]. Though it is the 5th most common cause malignancy but remain as the leading cause of death among the women with gynaecological cancer. In spite of significant surgical and chemotherapeutic advance in treatment 5 years survival rate have not changed significantly in over 25 years and remains discouraging at 30%. From the clinical behavior of ovarian neoplasm, it is

almost impossible to distinguish a benign tumour from its malignant counterpart. So, in most cases it is diagnosed when it becomes already metastatic. Of the ovarian cancer that reports for treatment-80% of ovarian tumours are of epithelial origin, 10% of stromal origin and 5% of germ cell origin, while remainder fall into the other groups ^[4]. Dysgerminoma of the ovary is an uncommon gynaecological tumour representing 2% of all ovarian malignancies ^[5]. Cure rates, even in presence of metastases, are high ^[6]. Management of stage 1 disease remains controversial with some recommending unilateral oophorectomy as the treatment of choice whilst others advocate radiotherapy in addition to oophorectomy ^[7]. Numerous factors have been suggested to increase woman's risk of epithelial ovarian cancer but the only two factors of major importance are well supported by epidemiological studies are nulliparity including infertility and family history of ovarian cancer. The familiar aggregation is attributable in part to a family history of ovarian cancer. The familiar aggregation is attributable in part to a family of genes BRCA1 & to a lesser extent BRCA2 which predispose to both breast cancer and ovarian

cancer. Increase pituitary gonadotropin stimulation and incessant ovulation are two possible mechanism of the increased risk of ovarian cancer from nulliparity. There is substantial evidence that contraception plays an important role in the reduction of ovarian cancer specially those woman who carries of either BRCA1 & BRCA2 mutation [8]. In contrast, in studies conducted by Mankar and Jain [9] metastatic tumors were 20% and 15.38%, respectively. Various tumour markers have now been developed which may help in differentiating benign from malignant lesions. More importantly, if serum levels are elevated pre-operatively, they are useful in follow-up and the detection of recurrence. For epithelial ovarian tumours the most important of these is serum CA-125, a surface glycoprotein. Elevated values of more than 35 U/ml are found in over 80% of patients with nonmucinous epithelial ovarian cancers but only 1% of the used as tumour markers. In germ cell tumours, the value of tumor markers has been proved for a long time. Alpha-fetoprotein, hCG, Lactic dehydrogenase (LDH) and even CA-125 are used but the first two are more commonly used. Alpha-fetoprotein can be elevated in all expect dysgerminoma and choriocarcinoma, hCG in all except embryonal sinus tumour and immatures teratomas. In our country ovarian tumours both benign and malignant are quite common. In total 3.8% ovarian cancers are reported in National Institute of Cancer Research & Hospital (NICRH) in 2005, among 5411 patients in Bangladesh [10]. About abnormalities, Mankar DV reported only 5% of menstrual abnormalities. However non-neoplastic lesions like endometriotic cysts were not taken into consideration [11]. He observed other common presentations of abdominal pain and lump. A notable fact was that abdominal pain was present equally in both malignant and benign groups. Interestingly, 43% of abdominal masses were associated with benign lesions.¹¹ Findings similar to our study regarding menstrual complaints and abdominal pain were seen by Kanthikar SN and Winter Jo TV [12]. Abdominal pain was seen to be associated with 90% ovarian tumors in certain studies which also reported 66% of abdominal masses to be associated with malignant ovarian tumors [13]. This study will be undertaken to find out the presentations of ovarian tumour and their relation to age, parity and contraception.

2. Objective

The objective of this study was to evaluate the clinical presentations of several patients with ovarian tumour.

3. Methodology & Materials

This was a cross sectional prospective study and it was conducted at Inpatient department of Obsterics and Gynaecology of Rajshahi Medical College Hospital, Bangladesh during the period from January 2007 to December 2007). A total of 100 consecutive patients were included in this study. All the patients were clinically suspicious of diagnosed of ovarian tumour and also supported by ultra-sonogram and confirmed by laparotomy findings and histopathological findings. Before starting the intervention proper written consents were obtained from all the participants. This study was approved by the ethical committee of the mentioned hospital. According to the inclusion criteria, clinically suspicious of ovarian tumour and also supported by ultra-sonogram and pelvic masses which were finally diagnosed as ovarian neoplasm were

included in this study. On the other hand according to the exclusion criteria, some cases admitted as ovarian cyst and with their relevant symptoms but finally not diagnosed as ovarian neoplasm were excluded from this study. Through proper administrative procedure by the researcher took the verbal consent of the patient to interview and examine her. Finding was recorded after data collection, data were checked for consistency and necessary corrections were made of needed. Data were analyzed by using computer software SPSS.

4. Result

This prospective study was conducted at the Department of Obstetrics and Gynecology of Rajshahi Medical College Hospital, Rajshahi, Bangladesh. The aim of this study was to evaluate the clinical presentations of several patients with ovarian tumour. Out of total 100 cases, benign neoplasm constituted 84(84%) and malignant neoplasm constituted 16 (16%) cases. The results of benign and malignant ovarian neoplasms in regard to age, parity, physical sings, per vaginal examination, laparotomy findings, together with their macroscopic & microscopic findings are tabulated separately. As this study was done on a very limited number of cases, number of malignant ovarian neoplasm were few, they have not been tabulated separately. The age range of the study population shows the age was 10-60 years. Maximum patient was the age group of 41-50 years. Among 100 cases of ovarian tumor parity and marital status were analysed. Distribution of parity and marital status shows 15% cases were nulliparous and 70% were parous. There was a strong family history regarding occurrence of ovarian tumour. In this study population 5% cases had the positive family history and 95% had no such history. Pattern of menstrual cycle among cases were 70% had regular menstrual cycle with average menstrual blood loss, 12% had irregular cycle, 15% were menopausal, 3% were prepubertal age. Among 100 cases, 85 cases were married. 58.83% were not using any contraceptives, 23.53% were using pills, and 12.94% with injectable contraceptives and 4.7% were with IUCD. Among the cases, 40% patient had symptoms for 0-6 months, 22% had symptoms for 7-12 months, 14% had symptoms from 13-18 months, 12% from 19-24 months, 4% from 25-30 months, 2% from 31-36 months and 6% had no symptoms. Out of 100 cases, 90% complained of lump in the lower abdomen, 60% complained of vague abdominal discomfort and occasional pain in the lower abdomen 15% complained of loss of appetite, features of dyspepsia, flatulence, 21% complained of loss of body weight, 12% complained of abnormal vaginal bleeding. Anaemia was present clinically in 90% cases, mass were present in the abdomen in 90% cases, 13% had ascities. During abdominal palpation in 90% cases mass were found. Regarding consistency of the masses 64% mass were cystic, 16% were firm, 7% were solid, 3% were partly solid and partly cystic. Regarding findings of vaginal examination 66% cases had uterus normal in size, 69% cases mass is separated from the uterus, 16% cases mass could not be separated from the uterus, 8% had bulky uterus and 11% cases had atrophic uterus. Ultra sonogram was done prior to hospital admission in 77% cases and after hospital admission in 23% cases. Ultra sonographic findings correlated with laparotomy findings in 80% cases and ultra sonographic findings not correlated with laparotomy findings in 20% cases. Among 100 cases 82% had unilateral tumour and 18% had bilateral

tumour. 74% tumours were cystic, 18% tumours were solid, 8% tumours were partly solid and partly cystic, Haemorrhagic peritoneal fluid present in 11% cases, 13% cases adhesions to surrounding structures. Macroscopic findings of tumour following Laparotomy of 100 cases shows, in 34% cases size of tumours is 11-15 cm, 84% cases of ovarian tumour capsule is intact, 74% cases of tumour is cystic, 68% uniloculated, 40% cases of tumour fluid is thin serous fluid. After histopathological examination of 100 cases report shows 35% were serous cystadenoma, 29% cases mucinous cystadenoma, 20% cases were mature teratoma, 5% cases were serous papillary adenocarcinoma, 6% cases were mucinous cyst adenocarcinoma, 2% dysgerminoma, 2% endometrioid carcinoma, 1% krukensberg tumours.

Table 1: Distribution of symptoms among participants (N=100)

Symptoms	n	%
Lump in the lower abdomen	90	90
Feeling of abdominal distension	26	26
Vague abdominal discomfort and pain	60	60
Sudden severe abdominal pain	20	20
Loss of appetite, features of dyspepsia, flatulence	15	15
Loss of body weight	21	21
Abnormal vaginal bleeding	12	12
Incidental diagnosis (no symptom)	6	6
Respiratory embarrassment & abdominal swelling	10	10

Table 2: Duration of symptoms among participants (N=100)

Duration (Months)	n	%
0-6	40	40
7-12	22	22
13-18	14	14
19-24	12	12
25-30	4	4
31-36	2	2
No symptom	6	6
Total	100	100

Table 3: Physical signs among participants (N=100)

Signs	n	%
Anaemia (Absent)	10	10
Anaemia (Mild-moderate)	76	76
Anaemia (Severe)	14	14
Mass in the abdomen	90	90
Ascites	13	13
Tenderness	54	54
Mobile mass	76	76
Fixed mass	24	24

Table 4: Consistency of the mass on abdominal palpation

Consistency	n	%
Cystic	64	64
Firm	16	16
Solid	7	7
Partly cystic/partly solid	3	3

Table 5: Findings of vaginal examination of participants

Findings	n	%
Uterus Normal in size	66	66
Uterus bulky	8	8
Atrophic Uterus	11	11
Mass is separated from uterus	69	69
Mass could not be separated from uterus	16	16

Table 6: Laparotomy findings of the participants (N=100)

Findings	n	%
Unilateral tumour	82	82
Right sided	42	42
Left sided	40	40
Bilateral tumour	18	18
Haemorrhagic peritoneal fluid	11	11
Adhesions to surrounding structures	13	13
Cystic tumour	74	74
Solid tumour	18	18
Partly solid/partly cystic	8	8
Clear peritoneal fluid	12	12
Peritoneal seeding	9	9

5. Discussion

In a study they stated that, ovarian tumor may occur at any age, including infancy and childhood. Incidence rate, however increase with age, with the greatest number of new cases being diagnosed beyond 4th and 5th decade [14]. The findings of this study mostly correlates with the these findings. Protective effect of high parity & link between parity & ovarian cancer has been attributed to their impact on ovulatory frequency leading to the “incessant ovulation” theory of the cause of ovarian cancer [4]. In a study of 550 cases of ovarian tumour by Mildred and Dockerty, 80% were married and 67.2% were parous. In the present series, 70 (70%) cases were parous, 15 (15%) cases nulliparous & 15 (15%) cases were unmarried. In a study they stated, approximately 1 in 70 newborn girls in the USA will develop ovarian cancer during her infetime [8]. In most of the studies done regarding relationship between family history and ovarian tumour, no conclusive evidence was found that it is an inherited disease. There is genetic mutation which is inherited subsequently. In this study, only 5 (5%) patients gave the history of ovarian tumour in her 1st degree relations. This figure is not significant but this study was compared with previous works and was found positive family history [8] of 5.71%. In this study the most common symptom (90%) was lump in lower abdomen, vague abdominal discomfort and occasional lower abdominal pain was in 60% of cases, flatulence and dyspepsia with loss of appetite was found in 15% of cases. Other symptom such as loss of weights was 21%, feeling of distension 26%. Abnormal vaginal bleeding 12% and respiratory problem was in 10% cases. In this study most frequent duration was 0-6 months (40%) which is consistence with previous studies. In the present study 90 (90%) cases had anaemia, of which 14 (14%) were severely anaemic. Mass in the abdomen was detected in 90 (90%) cases. Mass was fixed in 24 (24%) cases and mobile in 76 (76%) cases. Mass was tender in 54 (54%) cases. Ascites was present in 13 (13%) cases. One of the previous studied showed anaemia 82.86%37 cases & 88.0%38 cases & 91% cases. So, the incidence of anaemia is almost consistent with the previous studies, reflecting the poor socioeconomic condition of our country. Vaginal examination was tried in unmarried patient but failed and they were diagnosed by per rectal examination. In 69% cases, mass was separate from the uterus. So 69 cases were the diagnosed clinically as obvious ovarian neoplasm before laparotomy. The finding was comparable with previous studies. In total 18.82% cases mass could not be separated from uterus in this study which is consistent with previous studies. The commonest symptom in the present study was abdominal pain and discomfort and it was more than 60%. This is similar to a study by Rashid *et al*, in which 59% of the patients had

abdominal pain while mass/distension was seen in 37% of the patients [15]. In the present study, in 100% cases ultrasonography was done. In previous study it was shown that ultrasonography was done in 92.0% cases, which is less than the present study mostly due to less availability⁸ of ultrasonogram at that time & accuracy of previous study was 96.84%, which is more than the present study. In the present study, 82% cases had unilateral tumour, 18(18%) cases were had haemorrhagic peritoneal fluid. Adhesions to surrounding structures was found in 6(6%) cases, peritoneal seeding in 9(9%) cases. All bilateral tumours were not malignant. All cases with haemorrhagic peritoneal fluid and peritoneal seeding, latter on confirmed as malignant neoplasm histopathologically. Results are almost consistent and it was found that percentage of right-sided neoplasm is slightly more than left-sided which does not prove that incidence is more in left side. It may be due to study of small number of cases. The macroscopic size of the neoplasm ranged from 6-36cm. In this series 28(28%) cases ranged from 6-10cm had an in 34(34%) cases ranged from 11-15cm, 20(20%) cases ranged from 16-20cm, 10(10%) cases ranged from 21-25cm, 4(4%) cases ranged from 26-30cm, 4(4%) cases ranged from 31-35cm. Ovarian neoplasm may be of variable size, of them mucinous cystadenoma teaching enormous proportions. Shaw (1932) reported a number of benign tumours weighing more than 200lbs, the heaviest being a case described by Spohn of Texas which weighed 328lbs (148kg). Cut section showed unilocular tumour in 68(68%) cases, multiloculated in 32(32%) cases, serous fluid in 40(40%) cases, thick viscid mucoid fluid in 24(24%) cases, thick sebaceous fluid in 10(10%) cases, and partially¹⁸ haemorrhagic fluid in 8(8%) cases. Ovarian tumour is leading cause of death of women. Treatment differs in different stages of cancer. Conventionally, ovarian malignancy was treated by aggressive surgery. Now-a-days conservative surgery is being increasingly practiced, for stage 1 malignant epithelial tumours of the ovary and young childless women. Several authors has compared conservative versus radical treatment for common epithelial carcinoma of the ovary. Mulnnel studied 133 patients of ovarian cancer, 28 patients were treated by conservative surgery, 105 patients were treated radically. Five (5) years survival rate was 75% in both groups. In the present study 24(24%) cases were treated by cystectomy who was younger age group and unmarried. One sided salping-oophorectomy was done in 28(28%) cases who were young married and family was not completed. The masses were benign in these cases which were confirmed by histopathology. In total 34(34%) cases total abdominal hysterectomy with bilateral salpingo-oophorectomy was done who were in peri-menopausal women and family was completed. These were proved to be benign, confirmed by histopathological reports. Palliative surgery was done in 3(3%) cases where tumours were too large with excessive adhesion. Later on they were proved as malignant tumour. Omentectomy was done for 2 purposes, first staging of the tumour and second is prophylactic removal of possible sources of metastasis. In this present study in 13(13%) cases omentectomy was done which were proved malignant after histopathology.

6. Limitations of the study

This was a single centered study with a small sized of sample. So the findings of this may not reflect the exact

scenario of the whole country.

7. Conclusion and recommendations

For getting more specific findings, we would like to recommend for conducting more studies regarding the same issue with larger sized sample.

8. References

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