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Evaluation of Clinical and Laparotomy Findings of Ovarian Tumor

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Abstract

Background: In Bangladesh, ovarian malignancy is quite common. Given the growing emphasis on improving female health, the prevention, early detection & and early treatment of female cancer will undoubtedly become more important at present & and in the future. ***Objective*:** To evaluate the clinical and laparotomy findings of ovarian tumor. ***Method*:** This cross-sectional study was conducted in the Department of Obstetrics and Gynaecology in a Tertiary Medical College and Hospital from July 2021 to December 2022. 50 consecutive patients who attended the outpatient and who were admitted to this Hospital during this period, were taken as the study population. ***Results*:** During this study, out of 50 cases 32 (64%) complained of vague abdominal discomfort and occasional pain in the lower abdomen and 23 (46%) complained of a lump in the lower abdomen. Anemia was present clinically in 45 (90%) Mass was present in the abdomen of 44 (88%) patients. There were unilateral neoplasm in 43 (86%) cases and (14%) cases were bilateral. In 7 (14%) cases, neoplasms were solid, in 7 (14%) cases adhesions to the surrounding structures, partly cystic partly solid were 7 (14%) cases, clear peritoneal fluid in 5 (10%) cases and peritoneal seedling in 3 (6%) cases. ***Conclusion:*** Incidence of hospital admission of ovarian neoplasm in this study was 5.8%. Regarding nature of the neoplasm, 86 percent were found benign and 14 percent malignant. The mean age of the patients having neoplasm 35.5 years. As ovarian neoplasm is a silent killer disease, if we can provide some information through mass media, it may be of some help in early diagnosis of ovarian neoplasm and thereby could help our youthful victims.

Keywords: Ovarian tumor, Clinical findings, laparotomy findings.

INTRODUCTION

Malignant ovarian tumour is the fourth most common female cancer & among 3.5% of all cancer in women [1]. Though it is the fourth most common cause of malignancy but remains the leading cause of death among women with gynecological cancer & inspite of significant surgical & and chemotherapeutic advancement in treatment, 5 years of survival rates have not changed significantly in over 25 years & 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, most of the cases it is diagnosed when it becomes already metastasized of the ovarian cancer that reports for treatment, 80% belongs to stage III & IV & only 20% belongs to stage I & II. This unfavorable distribution is because of ovarian cancers are seldom symptomatic in the early stage. So early detection is possible only with high index of suspicion [1-5].

About 70 to 80 percent of primary ovarian tumours are of epithelial origin, 10 percent of stromal origin and 5 percent of germ cell origin, while the remainder falls into the other groups. Numerous factors have been suggested to increase woman's risk of epithelial ovarian cancer but the only 2 factors of major importance that are well supported by epidemiological studies are nulliparity including infertility & family history of ovarian cancer. The familial aggregation is attributable in part to a family of genes BRCA 1 & to a lesser extent BRCA 2 which oredisoose to both breast cancer & ovarian cancer. Increase pituitary gonadotrophin stimulation & incessant ovulation are two possible mechanism of the increased risk of ovarian cancer in nulliparity. There is substantial evidence that contraception plays an important role in the reduction

of ovarian cancer especially those woman who carries of either BRCA 1 or BRCA 2 mutation [6-11].

In our country, Ovarian malignancy are quite common. Given in the growing emphasis on improving female health, the prevention, early detection & early treatment of female cancer will undoubtedly become more important at present & in future. There are no satisfactory screening test which arc cost effective for diagnosis of ovarian neoplasm. Routine pelvic examination will not detect early ovarian cancer. Mass screening with peritoneal lavage & pouch of Douglas aspiration cytology had poor acceptance & yield [12].

Till now, we have to rely on the early symptoms of ovarian neoplasm through mass media so that they can be helped & thereby increase survival rate.

This study was undertaken to find out the incidence of ovarian neoplasm, their relation to age, parity & contraception. All the patient was studied thoroughly with a hope to correlate ovarian neoplasm with their different presentation so that it may be helpful to some extent at least for early diagnosis & management of ovarian neoplasm.

Objective

To evaluate the clinical and laparotomy findings of ovarian tumor.

METHOD

This cross-sectional study was conducted in the Department of Obstetrics and Gynaecology in a Tertiary Medical College & Hospital from July 2021 to December 2022. 50 consecutive patients who attended the outpatient department of Obstetrics and Gynaecology and who were admitted in the department of Obstetrics and Gynaecology of this hospital during this period, was taken as the study population. Pelvic mass which were finally diagnosed as ovarian neoplasm were included in this study. Information was collected by taking a medical history and clinical examination. Proper permission was taken from the concerned departments. Their informed written consent were taken in a consent form before data collection.

All data were recorded systematically in the preformed data collection form. Quantitative data were expressed as mean. Qualitative data were expressed as frequency distribution and percentage. Statistical analysis was performed by using a statistical package for social science (SPSS) of Windows version 12.0. A probability value < 0.05 is considered as a level of significance.

RESULTS

Table 1 shows the age distribution of the patients. Maximum patients were in the age group 21-30 years. The mean age was 35.5 years.

Table 1: Age distribution of patients with ovarian neoplasm, (n=50)

Age Group (Years)	No. of patients	Percentage
10-20	4	8.0
21-30	17	34.0
31-40	6	12.0
41-50	14	28.0
51-60	5	10.0
61-70	4	8.0

Table 2 Shows that out of 50 cases, 7 (14%) were unmarried and 43 (86%) were married of which 6 (12%) were nulliparous and 37 (74%) were parous.

Table 2: Distribution of parity of the Patients, (n=50)

Parity	No. of patient	Percentage
Unmarried	7	14.0
Married		
Nulliparous	6	12.0
Parous	37	74.0

Table-3 Shows the pattern of menstrual cycles of the patients. Out of 50 cases, 33 I (66%) had regular cycles with average blood loss, 6 (12%) had irregular cycles, 9| (18) were postmenopausal, puberty 2 (4%).

Table-3: Menstrual cycle of the cases, (n=50)

Menstrual cycle	No. of patients	Percentage
Normal (28+2 days)	33	66.0
Cycle with average blood loss		
Irregular Cycle	6	12.0
Menopause	9	18.0
Prepubertal age	2	4

Table 4 Shows symptoms of the patients, Out of 50 cases 32 (64%) complained of vague abdominal discomfort and occasional pain in the lower abdomen and 23 (46%) complained of a lump in the lower abdomen.

Table-4: Symptoms of ovarian neoplasm, (n=50)

Symptoms	No. of patients	Percentage
Lump in the lower abdomen	23	46.0
Feeling of abdominal distension	16	32.0
Vague abdominal discomfort and occasional pain in the	32	64.0
lower abdomen Sudden severe abdominal pain, puberty cases	6	12.0
Loss of appetitie, features of dyspepsia, flatulence	6	12.0
Loss of body weight	15	30.0
Abnormal vaginal bleeding	10	20.0
Incidental diagnosis (No symptom)	6	12.0
Respiratory embarrassment	2	4.0
with rapid abdominal swelling	7	12.0

Table-5 Shows physical sings. Anaemia was present clinically in 45 (90%) Mass was present in the abdomen of 44 (88%) patients.

Table 5: Physical signs, (n=50)

Signs	No. of patients	Percentage
Anaemia		
clinically absent	5	10.0
Mild to moderate	41	82.0
severe	4	8.0
Mass in the abdomen	44	88.0
Ascites	5	10.0
Tenderness	7	12.0
Mobile mass	39	78.0
Fixed mass	13	26.0

Table-6 Shows Ultrasonographic findings of 50 cases. In 46 (92%) cases Ultrasonography was done prior to hospital admission and in 4 (8%) cases it was done after hospital admission.

Table-6: Ultrasonographic findings, (n=50)

Findings	No. of patients	Percentage
Ultrasonography	50	100.0
Prior to hospital admission	46	92.0
After hospital admission	4	8.0
Ultrasonographic findings correlated with laparotomy findings	45	90

Table-7 shows macroscopic findings of the tumors, such as size, consistency cut section and contents.

Table-7: Naked-eye findings of the tumour, (n=50)

Findings	No. of patients	Percentage
Size of tumour (cm)		
6-10	25	50.0
11-15	14	28.0
16-20	5	10.0
21-25	3	6.0
36-30	2	4.0
31-35	1	2.0
Consistency		
Cystic	36	72.0
Firm	3	6.0
Hard	4	8.0
Partly cystic/ Partly solid	7	14.0

Findings	No. of patients	Percentage
Cut Section		
Uniloculated	29	58.0
Multiloculated	14	28.0
Thin serous fluid	22	44.0
Thick viscid mucoid fluid	10	20.0
Thick sebaceous fluid	4	8.0
Partially hemorrhagic fluid	7	14.0

Table-8 shows laparotomy findings where unilateral neoplasm in 43 (86%) cases and 7(14%) cases were bilateral. In 7 (14%) cases, neoplasms were solid, in 7 (14%) cases adhesions to the surrounding structures, partly cystic partly solid were 7 (14%) cases, clear peritoneal fluid in 5 (10%) cases and peritoneal seedling in 3 (6%) cases.

Table 8: Laparotomy findings, (n=50)

Findings	No. of patients	Percentage
Unilateral neoplasm	43	86.0
Right sided	22	44.0
Left sided	21	42.0
Bilateral neoplasm	7	14.0
Hemorrhagic peritoneal fluid	4	8.0
Adhesions to surrounding structures	7	14.0
Cystic neoplasm	36	72.0
Solid neoplasm	7	14.0
Partly solid / partly cystic	7	14.0
Clear peritoneal fluid	5	10.0
Peritoneal seedling	3	6.0

Table-9 shows microscopic findings, 16 (32%) cases were serous cystadenoma, 11 (22%) cases were mutinous cystadenoma, 9 (18%) cases were mature cystic teratoma, 1 (2%) case was papillary serous cystadenoma, 2 (4%) cases were ovarian fibroma, 3 (6%) cases were mucinous cyst adenocarcinoma, 3 (6%) cases were dysgerminoma, 1 (2%) cases was granulosa cell tumour and 2 (4%) cases were pooly differentiated infiltrating adenocarcinoma.

Table-9: Microscopic findings

Findings	No. of Cases	Percentage
Serous cystadenoma	16	32.0
Papillary Serous cystadenoma	1	2.0
Mutinous cystadenoma	11	22.0
Mature cystic teratoma	9	18.0
Ovarian fibroma	2	4.0
Serous cyst adenocarcinoma	3	6.0
Mucinous cyst adenocarcinoma	2	4.0
Dysgerminoma	3	6.0
Granulosa cell tumor	1	2.0
Poorly differentiated infiltrating adenocarcinoma	2	4.0

DISCUSSION

In this study, incidence of hospital admission of ovarian neoplasm was 5.8 percent which was compared with previous study which shows the incidence as 7.48 percent and 6.25 percent respectively. Indian report quoted a 6.1 percent incidence which is consistent to the findings of the present study.

Table-1 shows age incidence of ovarian neoplasm. In this study, age rated from 10-60 years & highest incidence was found in the age group 21-30 years (34%) with a mean age of 35.5 years. This findings when compared with previous two works done in this country, found mean age as 33.33 & 37.46 years, respectively [13, 14]. The findings of this study mostly correlates with these findings,

Protective effects of high parity & link between parity & ovarian cancer have been attributed to their impact on ovulatory frequency leading to the "incessant ovulation" theory of the cause of ovarian cancer [15]. A study of 550 cases of ovarian tumour

reported that 80 percent were married and 67.2 percent were parous. In the present series 37 (74%) cases were parous, 6 (12%) cases nulliparous & 7 (14%) cases were unmarried [16]. This parity distribution almost correlates with previous works as 74. 2917 & 78. 018 percent were multiparous. This study does not reflect the theory of "incessant ovulation". It may be due to small number of patients. It needs further evaluation.

Even though malignant change may occur, ovarian neoplasm may remain symptomless. It is said that 15 percent of patients with malignant ovarian neoplasm are asymptomatic at the time of diagnosis more than 50 percent of ovarian malignancy have widespread disease at the time of laparotomy [17]. In this study, the most common symptom was vague abdominal discomfort & occasional pain in the lower abdomen. It was present in 64 percent cases. Pelvic lump in the lower abdomen was found in 46 percent cases. Loss of appetite features of chsesia and flatulence in 30 percent cases sudden severe lower abdominal pain in 6 cases, feeling of abdominal distension in 32 percent cases, loss of body weight in 20 percent cases, abnormal vaginal bleeding in 10 percent cases, respiratory embarrassment with rapid abdominal swelling in 12 present cases. This study was compared with previous works where there was vague abdominal discomfort & occasional pain in the lower abdomen in 68 percent cases, lump in the lower abdomen in 44 percent cases, loss of appetite, features of dyspepsia flatulence in 34 percent cases [18]. It was found that common symptoms were nonspecific in these two studies, so diagnosis is still difficult. 2 (4%) cases in the present study were diagnosed incidentally & finding of previous worker was 2 (4%) cases 18. It was seen that largest group of patients (44%) in the present study came with symptoms of shorter duration (0-6 months). This study when compared with other studies, it was found that most frequent duration was 2-6 months (31, 43%) & 0-6 months (40%) [19, 20].

Recently because of their low cost, widespread availability and patients tolerance, both abdominal & vaginal pelvic sonography have become the primary modality for imaging the female pelvis. In the present study, in 50(100%) cases, ultrasonography was done. In maximum cases (92%) it was done prior to hospital admission. Ultrasonographic diagnosis was accurate in 90% percent cases. In previous study, it was shown that ultrasonography was done in 92.0 percent cases, which is similar to the present study due to easy availability of ultrasound [21].

In the present study 43 cases (86%) cases had unilateral tumour, 7 (14%) cases were bilateral, 22 cases (44%) were right sided, 21(42%) left sided. 4 (8%) cases had hemorrhagic peritoneal fluid. Adhesions to surrounding structures was found in 7 (14%) cases, peritoneal seeding 3 (6%) cases. All bilateral tumour were not malignant. All cases with hemorrhagic peritoneal fluid and peritoneal seeding, latter on confirmed as malignant neoplasm histologically. All neoplasm adhesions were not malignant. 4 (8%) cases with adhesion were benign and 3 (6%) cases malignant, which were proved histologically later on. This study was compared With previous study arid showed that 18 percent cases had bilateral distribution, 44 percent patients had unilateral right-sided ovarian neoplasm and 40 percent patients had unilateral left-sided ovarian neoplasm18. 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 [22].

The macroscopic size of the neoplasm ranged from 6-3 5cm. In this series 25 (50%) cases ranged from 6-10cm and in 14 (28%) cases ranged from 11-15cm, 5 (10%)) cases ranged from 16-20cm, 3 (6%) cases ranged from 21-25cm, 2 (4%) cases ranged 26-30cm, 1 (2%) cases ranged from 31~35cm. Ovarian neoplasm may be of variable size, of them niucinous cystadenoma teaching enormous proportions. Shaw (1932) reported a number of benign tumours weighing more than 200Ibs, the heaviest being a case described by Spohn of Texas which weighed 3281 bs (148 kg)11. Cut section showed unilocular tumour in 29 (58%) cases multiloculated in 14 (28%) cases, serous fluid in 22 (44%) cases, thick viscid mucoid fluid in 10 (20%) cases, thick sebaceous fluid 4 (8%) cases, partially haemorrhagic fluid in 7 (14%) cases. The variable picture reflects various types of fluid content by various type of neoplasm Result of this study is almost consistent with previous works 3, who found unilateral cystic tumour in 28 (56%) cases, multilocular in 15 (30%) cases. Most of the cysts were unilocular 11. This finding correlates with the reference.

About 70- 80 percent of primary ovarian tumours are of epithelial Origin. 10 percent stromal origin & 5 percent of germ-cell origin. Serous & mucinous cystadenocarcinoma are the most common types of invasive epithelial ovarian cancer. They comprise 60 percent of all primary tumours of the ovary & 9 percent of those that are malignant. The ratio of serous to mucinous cystadenocarcinoma varies between 4:1 & 10:1 in different parts of the world3. In the present study, it was seen after histopathogical examination that out of 50 cases, 43 (86%) cases were benign & 7 (14%)) cases were malignant. Among them, 16 (32%) cases were benign serous cystadenoma, 11 (22%) cases mucinous cystadenoma, 9(18%) cases mature cystic teratoma, 2(4%) cases ovarian fibroma, 1 (2%) case papillary serous cyst adenoma. Serous cyst adenocarcinoma comprised 3 (6%) cases, mucuious cyst adenocarcinoma 2 (4%) cases, 3 (6%) cases dysgerminoma, 1 (2%) cases granulosa cell tumour, 2 (4%) cases poorly differentiated infiltrating adenocarcinonia.

CONCLUSION

Incidence of hospital admission of ovarian neoplasm in this study was 5.8%. Regarding nature of the neoplasm, 86 percent were found benign and 14 percent malignant. The mean age of the patients having neoplasm 35.5 years. As ovarian neoplasm is a silent killer disease, if we can provide some information through mass media, it may be of some help in early diagnosis of ovarian neoplasm and thereby could help our youthful victims. This present clinical study was done on a very limited number of patients. So, it may not, reflect the true picture of the condition in the community. If the study could have been done over a longer period, with a larger number of patients, supported by modern aids, with long-term follow-up facilities, then the incidence, symptoms, diagnosis would have been more appropriate to reach to definitive conclusion.

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