Original Research Article

Prevalence of ovarian tumours among ovarian mass lesions in Gajra Raja Medical College, Gwalior, India

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ABSTRACT

Background: Ovarian tumor is one of the most common gynecological tumors seen in female although there are different types of ovarian tumor but epithelial ovarian cancer is the fifth most common cause of cancer death in women. It is often called the "silent killer" because the disease is not often detected until it reaches an advance stage.
Methods: This observational study conducted on 130 patients from February 2015 to March 2017 in the Department of Obstetrics and Gynaecology in Gajra Raja Medical College, Gwalior. Clinical details of the patients included age, gynaecological and obstetric history, presenting symptoms, and surgery details. Histopathological reporting was done at our Pathology department.
Results: Out of total 130 patients with ovarian tumours studied 49.2% were > 60 years of age group, most of them were nullipara (53.8%), 54.6% with ovarian tumours presented after one-year development of symptoms. most of the symptoms were vague and nonspecific. Benign tumours were the most prevalent (79.2%), 19.2% were malignant tumours and 1.5% were borderline. Histological pattern of distribution of ovarian tumour shows that most of ovarian tumour were surface epithelial tumour (72 patients) followed by germ cell tumour (58 patients). Age wise distribution of study population showed that most of the surface epithelial tumour were more common in 3rd to 5th decade while most of germ cell tumour were more frequent in 2nd and 3rd decade.
Conclusions: For better prognosis and patient survival, early detection and treatment is mandatory, which may reduce mortality. There is need to increase awareness of population. Abdominal and pelvic bimanual examination should be carried out in every patient presenting with gynecological problem. Appropriate investigations in post-menopausal women in early period to diagnose the disease at an early stage.

Keywords: Germ cell tumour, Ovarian tumour, Surface epithelial tumour

INTRODUCTION

Ovarian tumor is one of the most common gynecological tumors seen in female although there are different types of ovarian tumor but epithelial ovarian cancer is the fifth most common cause of cancer death in women.[1] It is often called the "silent killer" because the disease is not often detected until it reaches an advance stage. Due to its anatomical location, such ovarian tumors may remain unnoticed for a long period of time.[2,3] Ovarian cancer usually affects the age of 65 years or older more frequently than younger women, they are not always malignant, but, the incidence of malignancy is about 15% -25% in different parts of the world.[4] These tumors behave in diverse ways and are generally not detected until they get large size.[5] Ovarian tumors may be cystic or solid in consistency. Most of the benign tumors are cystic but 80% of solid ovarian tumors are malignant.[3,6]

There are a number of risk factors associated with their origin. None of these has been yet proved except for age and parity. The relative risk for ovarian malignancy

increases significantly after the age of 40 years.[7,8] An early menarche and late menopause are associated with an increased risk. Use of oral contraceptive is associated with a reduced risk of benign ovarian neoplasma.[9,10] Common symptoms include abdominal distension, abdominal and pelvic pain, and dyspepsia and also increased the frequency of urine. Family history of ovarian and breast cancer has strong link and considers as major risk factor for ovarian cancer.[11-13]

One theory is that ovarian carcinoma arises from endometriosis; it is the presence of endometrial tissue rather than uterus.[14]

METHODS

This observational study conducted on 130 patients from February 2015 to March 2017 in the Department of Obstetrics and Gynaecology in Gajra Raja Medical College, Gwalior.

All cases with ovarian mass lesions treated surgically were included in the study. All patients who refused to participate or opted for conservative treatment. Similarly, incomplete filled proforma or patient lost to follow up with histology reports are excluded from the study.

The diagnostic evaluation was done with investigations for exclusion of malignancy with USG, tumour markers, CT and MRI wherever indicated. Clinical details of the patients included age, gynaecological and obstetric history, presenting symptoms, and surgery details. Histopathological reporting was done at our Pathology department.

The histological characterisation of ovarian tumour was done according to World Health Organization Classification of Ovarian tumours.

RESULTS

Table 1: Frequency of age group of study participants.

Age group (yrs)	No. of patients	%
≤ 30	18	13.8
31-40	8	6.2
41-50	11	8.5
51-60	29	22.3
> 60	64	49.2
Total	130	100

Out of total 130 patients with ovarian tumours, most of patients 49.2% were >60 years of age while 6.2% in the age group of 30-40 years.

Out of total 130 patients of ovarian tumours, 53.8% were nullipara while 25.4% were primipara and 20.8% were multipara.

Table 2: Parity of women.

Age group (yrs)	No. of patients	%
Nullipara	70	53.8
Primipara	33	25.4
Multipara	27	20.8
Total	130	100

Table 3: Duration of symptoms.

Duration of symptoms	No. of patients	%
<6 months	19	14.6
6 months - 1 year	40	30.8
>1 year	71	54.6
Total	130	100

Above Table shows that, 54.6% with ovarian mass presented after one-year development symptoms for delay were non-specific symptoms, inadequate health care system, omission of pelvic examination of presentation, illiteracy and poverty.

Table 4: Frequency of various symptoms of study participants.

Symptoms	No. of patients	%
Asymptomatic	18	13.8
Nausea	22	16.9
Vomiting	4	3.1
Weight gain	9	6.9
Abdominal mass	49	37.7
Increased urinary frequency	28	21.5
Total	130	100

Early diagnosis of the ovarian cancer is a challenge to the gynaecologist due to fact that symptoms in early disease were vague symptom and non-specific.

Table 5: Type of ovarian tumour.

Type	No. of patients	%
Borderline	2	1.5
Benign	103	79.2
Malignant	25	19.2
Total	130	100

Out of total 130 patients of ovarian tumours, 79.2% were benign, 19.2% were malignant and only 1.5% were borderline.

Histological pattern of distribution of ovarian tumour shows that most of ovarian tumour were surface epithelial tumour (72 patients) followed by germ cell tumour (58 patients).

Age wise distribution of study population showed that most of the surface epithelial tumour were more common in 3rd to 5th decade while most of germ cell tumour were more frequent in 2nd and 3rd decade.

Table 6: Histological pattern of ovarian tumours.

Diagnosis	Benign	Borderline	Malignant	Total
Surface Epithelial Tumour	52	2	18	72
Serous tumour	34	-	9	43
Mucinous tumour	14	2	8	24
Endometrioid tumour	-	-	1	1
Malignant mixed mullerian tumour	-	-	-	-
Brenner tumour	1	-	-	1
Mixed epithelial tumour	2	-	-	2
Sex Cord-Stromal Tumour	-	-	-	-
Adult granulosa cell tumour	-	-	-	-
Fibroma	1	-	-	1
Thecoma	-	-	-	-
Sclerosing stromal tumour	-	-	-	-
Germ Cell Tumour	49	-	9	58
Dysgerminoma	-	-	2	2
Yolk sac tumour	-	-	-	-
Mature cystic teratoma	48	-	-	48
Ovarii	1	-	-	1
Immature teratoma	-	-	7	7
SCC arising from a dermoid cyst	-	-	-	-
Malignant mixed germ cell tumour	-	-	-	-
Grand Total	101	02	27	130

Table 7: Frequency of different classes of ovarian tumours in different age groups.

Classes of tumors	Total	Types	< 20	20-29	30-39	40-49	50-59	≥ 60	Total
Surface epithelial	72	Benign	2	8	13	9	11	9	52
		Malignant	0	2	2	5	8	1	18
Germ cell	58	Benign	4	28	13	3	1	-	49
		Malignant	1	4	1	1	-	-	7

DISCUSSION

The ovary is a dynamic complex structure in embryology, histology, steroidogenesis, with its potential for malignancy, with its different components like germ cells, follicular cells and mesenchymal tissue each having different capability to form various tumours.

Present study reveals that the presentation of ovarian tumours is variable. Common symptoms were abdominal mass, pelvic/abdominal pain. Other symptoms are dyspepsia, urinary frequency and urgency, loss of weight and ascites, which are more common in malignant tumours. These findings are in accordance to other studies**.**

In this study, 19.6% patients were asymptomatic while Muhabat Q et al studied 19.6% patients were asymptomatic.[15]

In present study, 53.8% women who had ovarian tumor were nullipara while 20.8% multipara. However, in study conducted by Khan I, at KEMU/Lady Willington hospital, 58.15% women who had ovarian tumor were multipara.[16] In another population based case control study, Ernstaff T et al. found that risk of ovarian tumors was higher in multiparous, a woman which is comparable to results of present study.[17]

In current study, 54.6% presented with ovarian tumor after 1 year of development of symptoms reason of delay were non-specific symptoms, inadequate health care system, omission of pelvic examination at presentation, illiteracy and poverty. Muhabat Q studied 43% patients were presented with ovarian tumour after >1 year of symptoms.[15]

In present study, benign neoplasma were 79.2%, borderline 1.5% and malignant neoplasia were 19.2%. Similarly, in study conducted by Yogambal M et al, they studied out of 402 patients with ovarian mass, benign neoplasma were 78.6%, borderline 0.75% and malignant neoplasia were 20.65%.[18] This study correlates with present study. Other study done by Makwanal H et al, they found benign neoplasma were 77.14%, borderline

3.57% and malignant neoplasia were 19.29%.[19] This study also correlates with our study.

In present study surface epithelial tumors were commonest, followed by germ cell tumors.

CONCLUSION

Most of the tumour were of surface epithelial tumour. Mature cystic teratoma was most common benign germ cell tumour. While serous cell carcinoma was commonest malignancies. Benign tumour were more common than malignancies in all age groups. Malignant surface epithelial tumour were mostly seen after 4 decades while malignant germ cell tumour were observed in a younger age group. For better prognosis and patient survival, early detection and treatment is mandatory, which may reduce mortality. There is need to increase awareness of population. Abdominal and pelvic bimanual examination should be carried out in every patient presenting with gynecological problem. Appropriate investigations in post-menopausal women in early period to diagnose the disease at an early stage.

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