



Study of Ovarian Malignancies in a Tertiary Care Hospital- A 3 Year Retrospective Study

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Abstract

Background and aims: Ovarian tumors are one of the major health problem and 7th most common cause of cancer related death in females. The aim of study is to study histopathological patterns of ovarian tumors and study age distribution as well as clinical presentation. **Material and Methods:** A 3 Year Retrospective Study Done In Department Of Pathology. 75 Cases Were Taken In This Study. All Specimens Were Subjected To Routine Processing And H&E Staining. **Results :** A Total 75 Cases Were Observed And Out Of Tese 75 Cases, 57.3% Were Benign , 4% Were Borderline And 38.7% Were Malignant. Histologically, Surface Epithelial Tumor Was The Most Common Constituting 82.6% Cases Followed By Germ Cell Tumors 14.6% And Sex Cord Tumor 2.6%. Benign Tumors Were Commonly Seen Between 20- 40 Years Age Group. And Malignant Between 50-80 Years Age Group. Most Common Clinical Presentation Was Pain Abdomen And Bleeding Per Vaginum. **Conclusion:** Tumors Originating From Surface Epithelium Were Most Common Followed By Germ Cell Tumors And Their Malignant Counterparts Were More Frequent In Elderly Age Group.

Keywords

Neoplasm; Epithelial Tumors; Germ Cell Tumors; Sex Cord Tumors; Ovarian

Introduction

Ovarian carcinoma is one of the most lethal gynecological malignancy and ranks overall 7th most common cause of carcinoma. ^[1] Ovarian carcinoma represents about 30% of all carcinoma of female genital tract ^[2] among women worldwide. Women between 65-85 years of age have ovarian carcinoma incidence rate 2.3 times higher as compared to young women peak incidence of invasive epithelial ovarian carcinoma is 50-60 years of age. 30% of ovarian neoplasms in postmenopausal women are malignant. ^[3] Whereas only 7% ovarian tumor in premenopausal women are malignant. The histogenesis

of ovarian tumor revolves around 4 main component namely surface epithelial, germ cell tumors, sex cord tumor and specialized ovarian tumor. ^[4] Due to vague symptoms, ovarian tumors are detected late. Identification of various histological patterns of ovarian tumors is important for diagnosis and prognosis. The purpose of this study was to access the histopathology pattern of ovarian tumor with age distribution.

Material and Methods

This study includes 75 cases of ovarian tumors studied retrospectively over a period of 3 years in Department of

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Pathology in ASCOMS, Sidhra Jammu. All ovarian samples were received and fixed in 10% formalin. Sections were taken from representative areas and subjected to routine processing. Paraffin blocks were made sections were 3-5 microns thickness and stained with H&E routine stain. Histological diagnosis were based on standard reference book.

The ovarian neoplasms were divided into surface epithelial, germ cell, sex cord stromal tumors, Non neoplastic tumors were not analyzed in this study.

Results

A total 75 cases of ovarian tumors are taken in this study. Out of 75 cases, 43 cases (57.3%) were benign, 3 cases (4%) were borderline and 29 cases (38.7%) were malignant. Histologically surface epithelial tumors were most common 62 cases (82.6%) followed by germ cell tumors 11 cases (14.6%) and sex cord tumors 2 cases (2.6%). Among surface epithelial tumors, serous consists of (50/62), mucinous (9/62), endometrioid (1/62), clear cell carcinoma (1/62) and Brenner tumor (1/62).

Among serous tumors 38 cases (51%) were benign, 10 cases (13%) were malignant and 2 cases (2.6%) were borderline. In mucinous tumors 5 cases (6.66%) were benign, 3 cases (4%) were malignant and 1 case (1.3%) was borderline tumor. Next to Surface epithelial tumor is the Germ cell tumor were most common, constituting 11 cases (14.6%). In Germ cell tumor, Dysgerminoma was the commonest constituting 9 (12%) out of 11 cases of germ cell tumor, followed by yolk sac tumor 2 (2.6%) cases. After germ cell tumor, the sex cord tumor comes next constituting 2 cases (2.6%). 1 case of fibroma and 1 case of granulosa cell tumor.

Among 75 cases of ovarian tumors, median age of presentation was 35 years. Majority of benign tumor were seen between 20-40 years of age and malignant were seen between 41-60 years of age. Germ cell tumor were seen in younger age group (median 19 years).

Our study revealed the presentation of ovarian tumor is variable. Commonest presenting symptom was pain abdomen (66.6%), followed by bleeding per vaginum seen in (26.6%) followed by mass abdomen and GI

Table 1. Distribution Of Various Microscopic Tumors In Ovary

S.NO	HISTOLOGICAL TYPE	NO.	PERCENTAGE
1	SURFACE EPITHELIAL TUMORS	62	82.6%
A	<u>SEROUS TUMORS</u>	50	66.6%
a	Benign tumors	38	51%
b	Borderline tumors	2	2.6%
c	Malignant tumors	10	13%
B	<u>MUCINOUS TUMORS</u>	9	12%
a	Benign tumor	5	6.66%
b	Borderline	1	2.3%
c	Malignant	3	4%
C	<u>ENDOMETRIOID TUMOR</u>	1	1.3%
D	<u>CLEAR CELL CARCINOMA</u>	1	1.3%
E	<u>BRENNER TUMOR</u>	1	1.3%
2	GERM CELL TUMOR	11	14%
A	DYSGERMINOMA	9	12%
B	YOLK SAC TUMOR	2	2.6%
3	SEX CORD TUMOR	2	2.6%
A	FIBROMA	1	1.3%
B	GRANULOSA CELL TUMOR	1	1.3%
	TOTAL	75	

Table 2: Common Presenting Complaints In Ovarian Tumor Patient

No.	Presentation	Cases	Percentage
1	PAIN ABDOMEN	50	66.7%
2	BLEEDING PER VAGINUM	20	26.6%
3	MASS ABDOMEN	3	4%
4	GI DISTURBANCES	2	2.7%
	TOTAL	75	

Table 3 . Age Wise Distribution:

AGE	BENIGN	BORDERLINE	MALIGNANT
<20 yrs	1	-	2
21-30 yrs	24	1	1
31-40yrs	18	2	1
41-50yrs	8	-	12
51-60yrs	1	-	10
>60 yrs	1	-	3
TOTAL	53	3	29

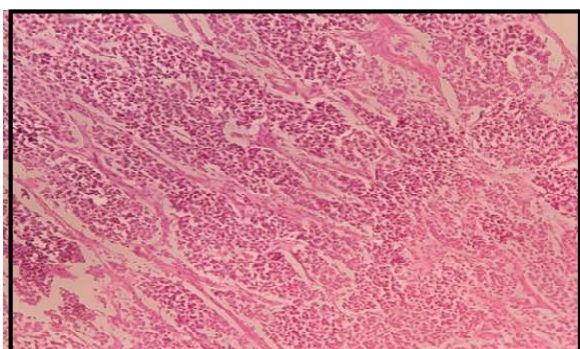


Fig 1. Dysgerminoma Case At 10x Magnification

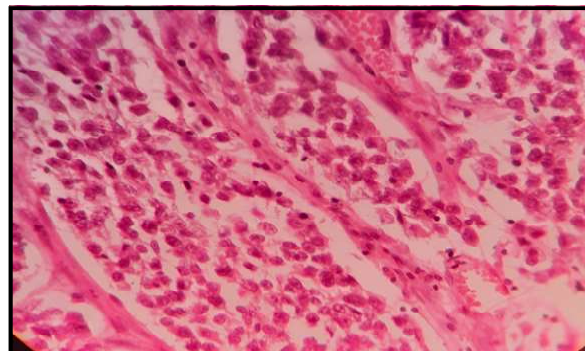


Fig 2: Dysgerminoma case at 40x magnification

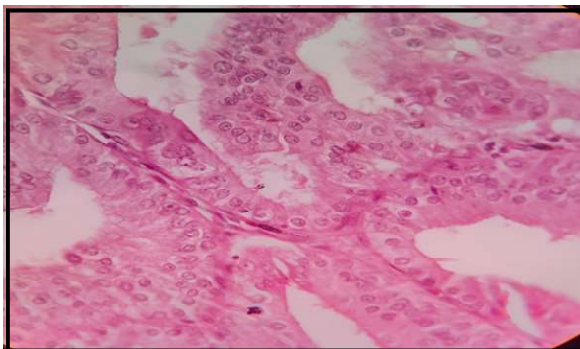


Fig 3: Case of Endometrioid tumor at 40x magnification

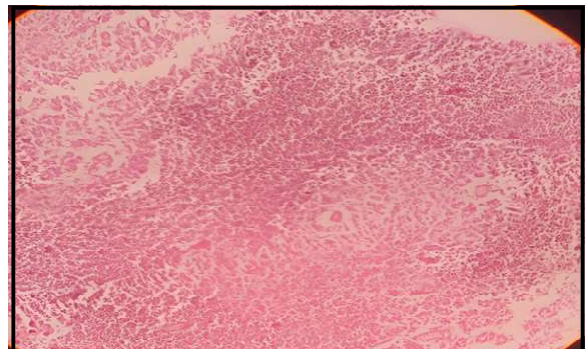


Fig 4 Serous cystadenocarcinoma at 40x magnification.

disturbances. However, exact nature of ovarian tumor cannot be confirmed by clinical presentation, microscopic appearance of tumor is must to find the histopathological patterns of the ovarian tumors.

Discussion

Out of the 75 cases , 43 are benign (57.3%), 3 cases (4%) were borderline and 29 cases (38.7%) were malignant. Histological surface epithelial tumor comprises



62 cases (82.6%), followed by germ cell tumor 11 cases (14.6%) and sex cord tumor 2 cases (2.6%). Similar observations were made by Narang Saneev *et al*^[6]. Among surface epithelial tumors, serous were most common accounting for 50 cases (66.6%), which is comparable to 50% reported by Kanthikar *et al*^[7]. Mucinous was seen in 9 cases (12%) which is almost similar to observation by Kanthikar *et al*^[7]. 1 case (1.3%) of endometrioid carcinoma seen in our study which was less than the observation made by Zamar *et al*^[8] which showed 6 cases (3.81%). In germ cell tumor, dysgerminoma is the most common accounting for (8%) of total ovarian tumors, followed by yolk sac tumor (2 cases). Sex cord tumors namely granulosa cell tumor seen in 1 case (1.3%) of sex cord tumor and 1 case of fibroma (1.3%) which is less than reported by Kanthikar *et al*^[7] who demonstrated 4.28% cases of fibroma.

Median age of all ovarian tumors was 35 years and median age of presentation of malignant tumor is 48 years. Benign tumors are most commonly seen between age 20-40 years whereas malignant tumors are seen above 40 years (41-60) years.^[9-13] In a study from Iran^[9], the median age was 49 years. High median age 60-70 years for malignant lesions reported from western countries southern and western part of India^[10]. However the study conducted by Gupta N 2019^[13] reported the lowest age of ovarian tumor as 6 days in case of dysgerminoma.

Our study revealed presentation of ovarian tumor is variable. In our study commonest presenting symptoms were pain abdomen 66.6% followed by bleeding per vaginum 26.6%, followed by mass abdomen 4% and GI disturbances 2.6%. This study goes with study by Jama^[11] where most common presentation was bleeding per vaginum, followed by pain abdomen and pelvic mass. However this doesn't correspond to study made by Yasmin S *et al*^[12] where pain abdomen was the most common presentation (70%), followed by mass abdomen (14%) followed by GI symptoms (7%) and bleeding per vaginum was not reported. Other study reported by Anugnya P^[14] showed the most common symptoms was dull and vague abdominal pain.

Conclusion

Epithelial tumors are most common followed by Germ cell tumor. Malignant counterparts most common in old age group. Such patients should be examined and treated promptly to reduce the morbidity and mortality. Malignant tumors are most common in old age group. Such patients should be practically diagnosed and treated as proper treatment can significantly reduce mortality and morbidity.

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Conflicts of Interest

There are no conflicts of interest.

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