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Original Research Article

Morphological Profile of Primary Ovarian Tumours: A Five Year Institutional Experience

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Abstract: Ovary is unique in the variety of lesions that arise from it. This morphological diversity of ovarian tumors poses many challenges in diagnosis for both gynecologists and pathologists. Ovarian tumours represent about 30% of all cancers of the female genital system. Conclusion: The present study is undertaken to study the diverse histomorphological patterns of ovarian tumors and thus offering a specific diagnosis which is of clinical significance.
Keywords: Ophorectomy, histopathology, ovary

INTRODUCTION

The ovary is the third most common site of primary malignancy in female genital tract :30% of all cancers of female genital tract.

But mortality rate exceeds the combined mortality of both endometrium and cervical neoplasm, because malignant potential of primary ovarian tumor is inversely proportional to symptomatology. Menstrual disturbance are infrequent and acute pain is rare unless torsion occurs.

Many of the malignant ovarian tumors: variable periods of time to grow and involve the adjacent organs before any symptoms develop or recognition takes place [1].

AIMS AND OBJECTIVES

- To know the incidence of various tumors of ovary.
- To study the distribution of benign and malignant ovarian tumors and correlation with clinical diagnosis.
- To study the various clinical presentations of tumors of ovary.
- To study the age distribution of ovarian tumors.

METHODS

This is an observational study of 250 cases conducted in the department of Pathology. Clinical details of the patients like age, obstetric history, presenting signs and symptoms, menstrual irregularities were obtained from gynecology department. The specimens were fixed 10% fresh formalin. After fixation, the specimen was examined grossly and multiple bits were taken from representative sites, processed, slides were prepared & stained with routine H & E stain.

RESULTS

Table 1: Distribution of presenting symptoms

Symptoms	No. Of . Cases	Percentage(%)
Abdominal pain	120	48
Mass per abdomen	60	24
Menustrual irregularities	60	24
Ascites	05	2
Weight loss with anorexia	05	2
Total	250	

Table 2: Distribution of ovarian tumors

Benign	202	80.8
Borderline	08	3.2
Malignant	40	16
Total	250	

Table 3: Shows the age distribution of ovarian tumors in the study group

S. no		Age in years			
		<19	20-39	40-59	>60
1	Benign	12	100	80	10
2	Borderline	0	2	4	2
3	Malignant	0	2	28	10

Table 4: Histopathological distribution of ovarian neoplasms in the study

SI.NO	Histopathological type	No. of cases	Percentage %
1	Surface epithelial tumors	190	76
2	Germ cell tumors	50	20
3	Sex cord stromal tumors	12	4.8
4	Mesenchymal tumors	03	1.2

Table 5: Distribution of surface epithelial tumors in our study

S. no		Surface epithelial tumors	
		serous	Mucinous
1	Benign	Cystadenoma- 130 Cystadenofibroma-04	Cystadenoma-36
2	Malignant	Cystadenocarcinoma- 16	Cystadenocarcinoma-04

Table 6: Distribution of germ cell tumors in our study

S.No	Germ cell tumors	No of cases
1	Mature teratoma	39
2	Immature teratoma	2
3	Dysgerminoma	8
4	Choriocarcinoma	1

Table 7: Distribution of sex cord stromal tumors in our study

S.No	Sex cord stromal tumors	No of cases
1	Fibroma	5
2	Thecoma	2
3	Fibrothecoma	2
4	Granulosa cell tumour	2
5	Sex cord stromal tumor	1

From above tables benign tumors were the most common followed by malignant tumors (Table 2). Most of the tumors were found in the age group of 40-59 years (Table 3). Histologically, surface epithelial tumors were the commonest (76%) (Table-4), followed by germ cell tumor (20.0%) . The most common benign tumor was serous cystadenoma in 130 cases (52%) (Table-5). The most common malignant ovarian tumors were serous cystadenocarcinoma.

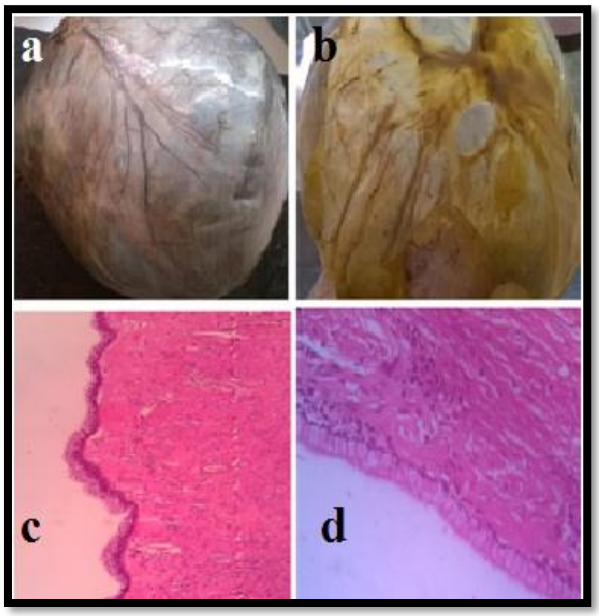

Fig-1: Mucinous cystadenoma

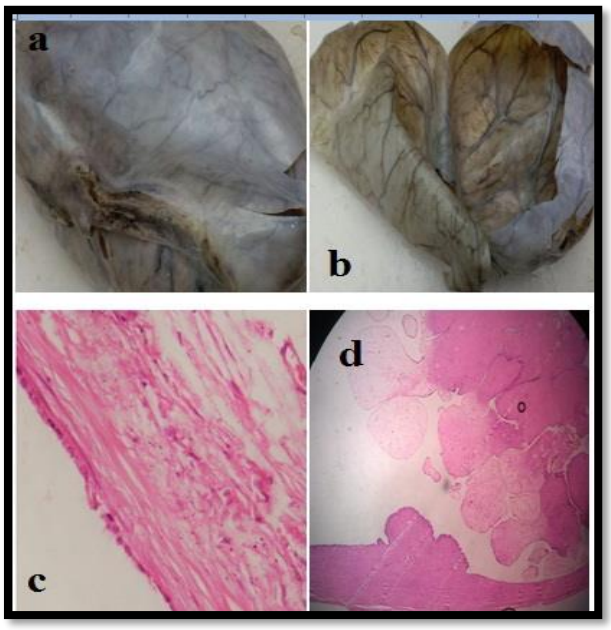

Fig-2: Serous cystadenoma and cystadenofibroma

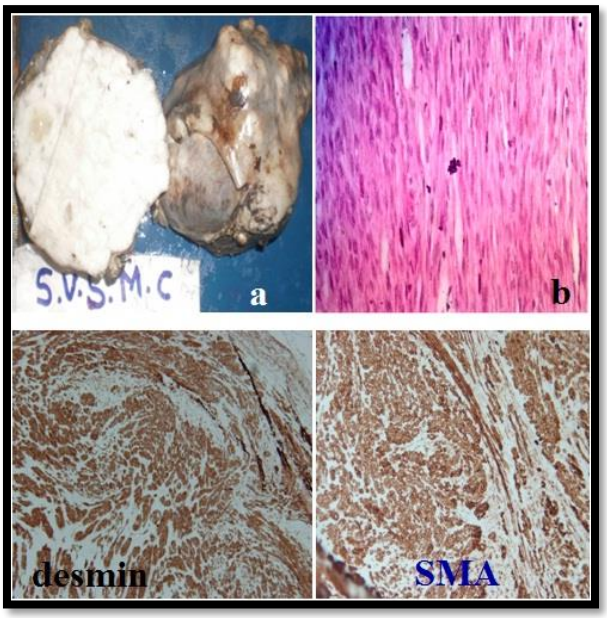

Fig-3: leiomyoma, SMA & desmin positive

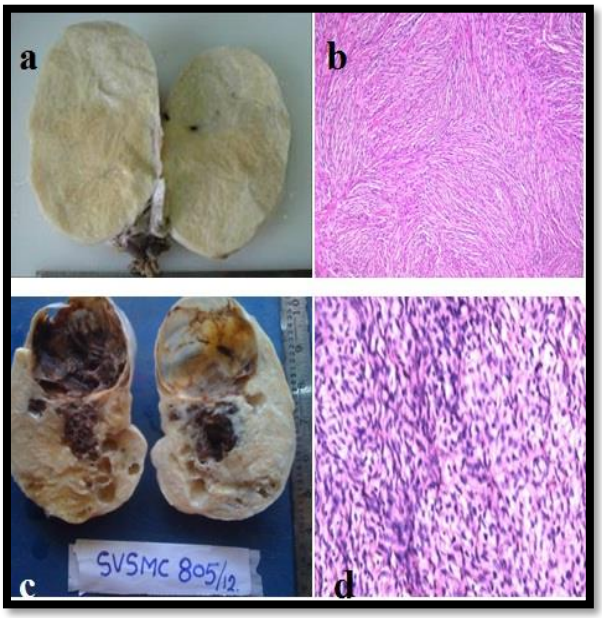

Fig-4: ovarian fibroma (above) and fibrothecoma (below)

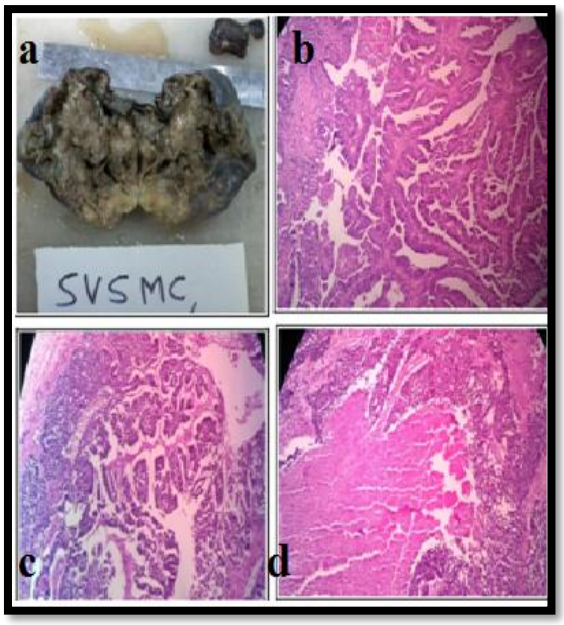

Fig-5: Papillary Serous adenocarcinoma and Endometrioid Type of ovarian carcinoma

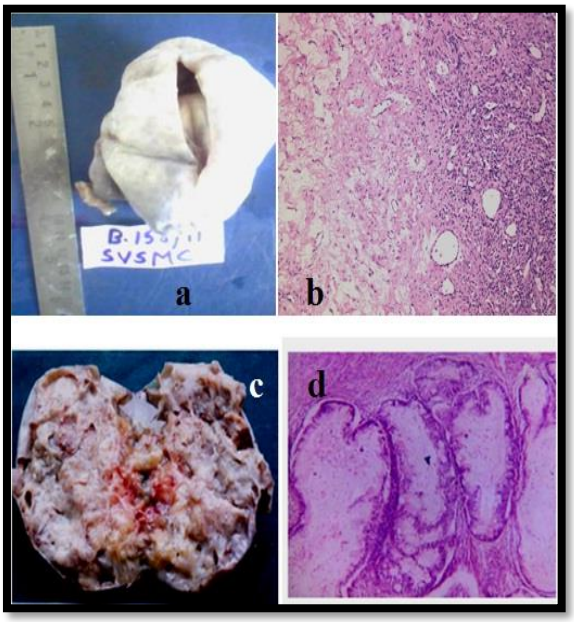

Fig-6: Sclerosing stromal tumor(above) & mucinous carcinoma

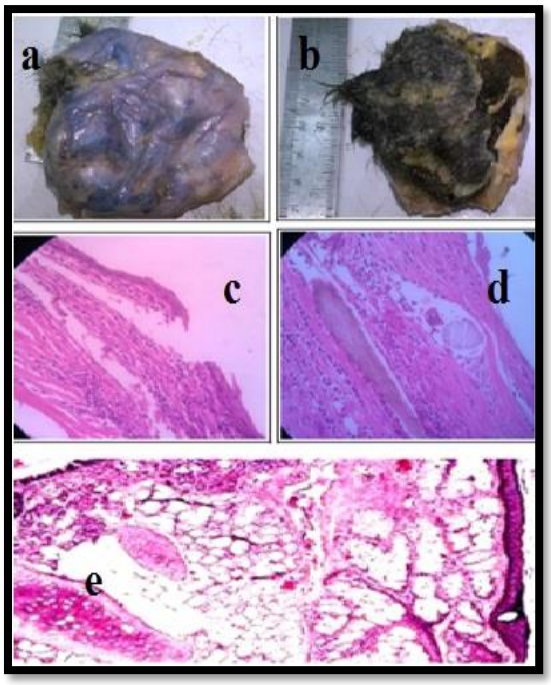

Fig-7: ovarian mature teratoma

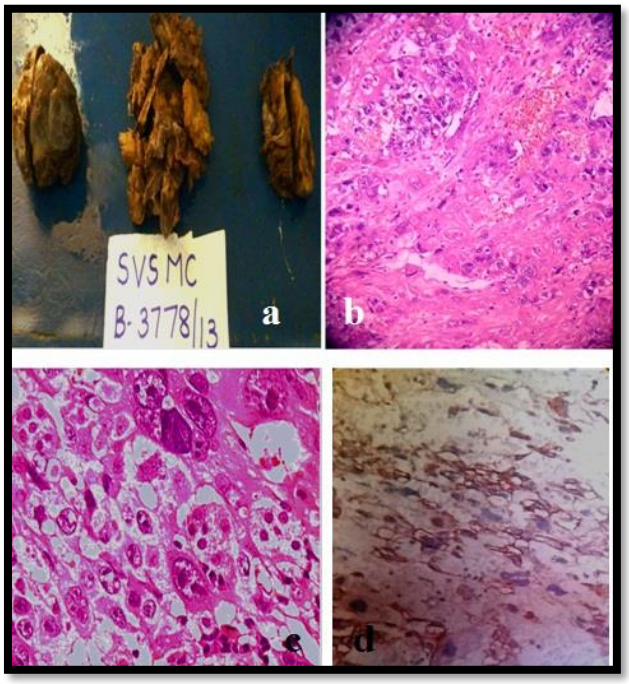

Fig-8: Choriocarcinoma and cytokeratin positive

DISCUSSION

Table 8: Relative percentage of different histological types of ovarian tumors in different studies and present study

Sl.No	Study	Surface epithelial tumors	Germ cell tumors
1	Gupta SC *et al* [2]	54.70%	31.00%
2		71.00%	
	Pilli *et al* [3]		21.00%
3	Kar *et al* [4]		
		79.00%	16.00%
4	Our study	76.00%	20.00%

In a similar study, Gupta *et al*. [2]reported 72.9% benign, 4.1% borderline and 22.9% malignant tumors which is close to our study.

In the Present study, incidence of surface epithelial tumours was 76 % which is close to the study done by pilli *et al* [3]. Incidence of germ cell tumors was 20% , which is close to the study done by pilli *et al* [3].

CONCLUSION

The major fraction of ovarian tumors in present study comprises benign tumors (80.8%) followed by malignant (16%) and borderline tumors (3.2%). The present study is comparable to kuldeepa *et al* [5], which comprised of 134 cases of which benign (82.35%) was most common followed by malignant (13.97%) followed by borderline (3.68). Most common tumors were from surface epithelial group.

Most common subtypes were benign serous cystadenoma followed by mucinous serous cystadenoma. Diagnosis of ovarian tumors can be difficult due to a variety of pathologic conditions that can affect the ovaries and present with similar clinical and radiologic manifestations. Knowledge of morphology and age-specific characteristics can help refine the diagnosis.

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