

### Clinicopathological study of ovarian tumours: A Retrospective Study.

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#### Abstract

**Introduction:** Ovarian tumors are heterogeneous group of neoplasm, which include both benign and malignant cases. The Ovarian tumor has the highest fatality-to-case ratio to all the gynecologic cancers.

**Materials and methods:** A retrospective study of ovarian tumour was carried out in our hospital over a span of one year in which 110 biopsies were evaluated. Results: The study comprise of 110 ovarian biopsies. Age of the patients ranged from 10 – 90 years. Mean age of presentation was 40 years. Most common presentation of ovarian tumor was pain and lump in the abdomen. Right ovary was most commonly involved. Surface epithelial tumors constituted majority of the ovarian neoplasm with 75.4% cases, followed by Germ cell tumor which constituted 19.09% cases, Sex cord - stromal tumors 5.45% cases and Metastatic tumors 0.90% cases.

**Conclusion:** The present study highlights the clinicopathological aspects of ovarian tumour with emphasis on histopathological diagnosis which help in formulation of further management after surgery.

**Keywords:** ovary, histopathology, surface epithelial tumour, germ cell tumour.

#### Introduction

Ovarian tumors are heterogeneous group of neoplasm, which include both benign and malignant cases.<sup>1</sup> Ovarian

cancer is the sixth most common cancer (age standardized incidence rate: 6.6/100,000) and the seventh leading cause of cancer deaths (age standardized mortality rate: 4.0/100,000) among women worldwide.<sup>2</sup> According to the population-based cancer registries in India, ovarian cancer is the third leading site of cancer among women next to cervix and breast cancer and comprising up to 8.7% of cancer in different parts of the country. The ovarian tumor has the highest fatality-to-case ratio to all the gynecologic cancers.<sup>3</sup> Although some studies have been published regarding pathological pattern of ovarian tumors from different countries of the world and also from India, comprehensive clinicopathological studies from this part of India is lacking. Aims and objective: This study was done to determine the clinicopathological pattern of Ovarian tumours.

#### Materials and methods

A retrospective study of ovarian tumour was carried out in our hospital over a span of one year in which 110 ovarian biopsies were evaluated. Data on clinical, radiological features of the cases were collected from all patients. All the biopsy samples were immediately put in 10% neutral buffered formalin followed by conventional tissue processing and embedding. Five micron thick sections were cut and slides were prepared. Each section was stained with Haematoxylin and Eosin stain and studied.

The lesions were histologically categorized according to WHO classification.

**Results**

The study comprise of 110 ovarian biopsies. Age of the patients ranged from 10 – 90 years. Mean age of presentation was 40 years. The youngest patient was a 25

year old female with dysgerminoma with and the oldest patient was 86 year female with papillary serous cystadenocarcinoma of ovary(fig 1). Most common presentation of ovarian tumor was pain and lump in the abdomen as shown in Table 1.

Table 1: Clinical presentations of Ovarian Tumour

Clinical Presentation	No Of Cases	Percentage
Pain	21	19.0
Lump in abdomen	20	18.1
Pain and lump in abdomen	44	4.00
PV bleeding	03	2.72
PV white discharge	03	2.72
Weight loss, anorexia	02	1.81
Menstrual abnormality	04	3.63
Ascitis	03	2.72
Asymptomatic	10	9.09
<b>Total</b>	<b>56</b>	<b>100</b>

Right ovary was most commonly involved. These tumors were classified according to WHO classification and categorized into 4 main groups. Surface epithelial tumors constituted majority of the ovarian neoplasm with 75.4% cases, followed by Germ cell tumor which constituted

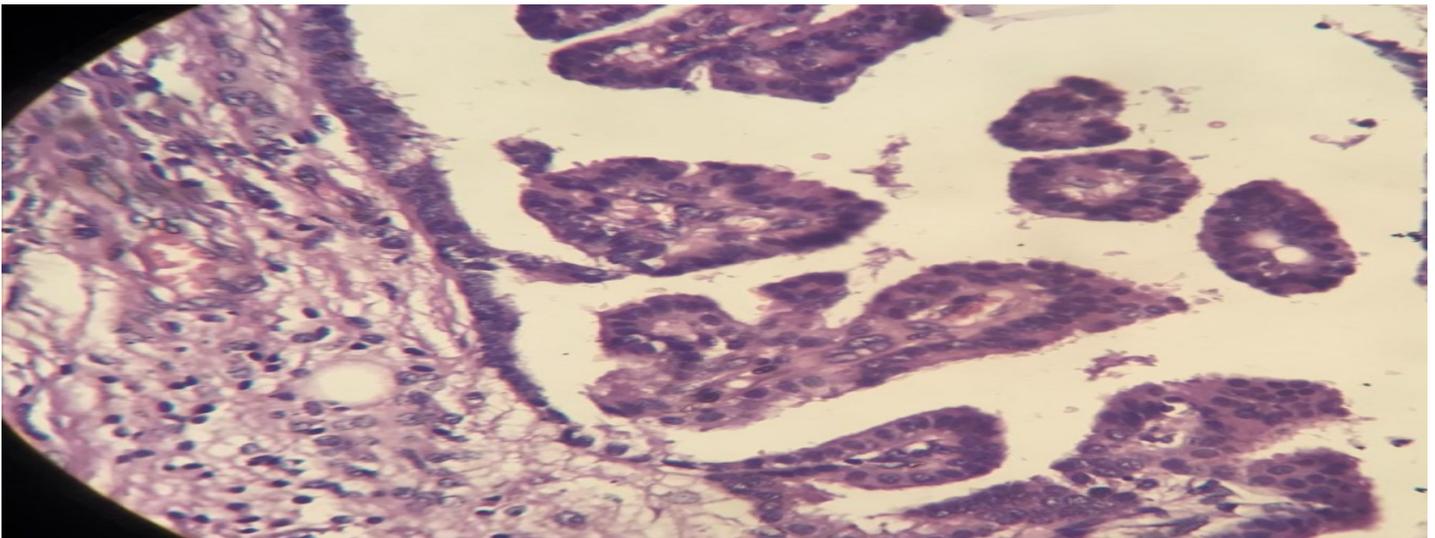
19.09% cases, Sex cord - stromal tumors 5.45% cases and Metastatic tumors 0.90% cases as shown in Table 2. The most common tumour in our study was serous cystadenoma(41.0%) followed by mucinous cystadenoma of ovary(18.1%).

Table 2: Histopathological findings in ovarian biopsies

		Lesions	No Of Cases	Percentage
Surface epithelial stromal tumour	Serous	Benign	53	41.0
		Borderline	03	2.72
		Malignant	02	1.81
	Mucinous	Benign	20	18.1
		Borderline	02	1.81
		Malignant	01	0.90
	Endometrioid	Benign	00	0.00
		Borderline	00	0.00
		Malignant	00	0.00
	Clear cell	Benign	00	0.00
Borderline		00	0.00	

	Malignant	01	0.90	
	Transitional cell	Brenner Tumour	01	0.90
		Brenner tumour of borderline malignancy	00	0.00
		Malignant Brenner tumour	00	0.00
		Transitional cell carcinoma	00	0.00
Epithelial-stromal		00	0.00	
Sex cord stromal tumour	Granulosa - theca cell tumor	01	0.90	
	Fibroma – thecomas	05	4.54	
	Sertoli- Leydig cell tumor	00	0.00	
	Other sex cord stromal tumors	00	0.00	
Germ cell tumours	Mature Teratoma	15	13.6	
	Immature Teratoma	04	3.63	
	Dysgerminoma	01	0.90	
	Yolk sac tumour	01	0.90	
	Mixed germ cell tumour	00	0.00	
Metastatic tumour		01	0.90	
<b>total</b>		110	100	

Fig 1: Papillary serous cystadenocarcinoma of ovary.



## **Discussion**

This study comprises of 110 cases of ovarian tumour. Most common symptom in our study was pain and lump in the abdomen. (37.5%). This was in accordance to the study done by Goff et al<sup>4</sup> where the most common symptom was pain and lump abdomen.. The most common tumour in our study was serous cystadenoma followed by mucinous cystadenoma of ovary which is in concordance with the study done by Amita S Patel et al.<sup>1</sup>

## **Conclusion**

The present study highlights importance of histopathological examination to find the true nature of the lesion. Histopathological examination plays an important role in the early diagnosis of ovarian tumour and provides an opportunity for a broad range of treatment options as well as potential for possible cure.

## **References**

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