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## A Study of Ovarian Lesions in a Medical College Hospital in Chennai, Tamil Nadu, India.

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### ABSTRACT

The most common type of lesions in the ovary are the cysts and the tumors. Majority of the ovarian cysts are benign with few cases being malignant. This is a retrospective study of all ovarian lesions in the department of Pathology, SBMCH, Chennai for a period of 1 year from August 2012 to September 2013. The specimens were received in 10% formalin from the obstetrics and gynaecological department of SBMCH. The specimen was processed in the histopathology lab and routine Haematoxylin & eosin staining done. A total of 80 cases were studied during this one year period. Among the 80 cases, cystic lesions accounted for 22.5%, benign ovarian tumor accounted for a majority of 72.5% and malignant tumor for 3.75%. 1 case of borderline seromucinous tumor was reported. The most common type of ovarian tumor was simple serous cystadenoma (42%) followed by mature cystic teratoma (12.5%). 2 cases of benign mucinous cystadenoma reported. 3 cases of serous papillary cystadenocarcinoma were reported.

**Keywords:** ovarian cyst, ovarian tumor, benign, malignant, borderline.

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## INTRODUCTION

The ovarian neoplasm is the third most common site of primary malignancy in the female genital tract. And it can occur at any age group. The most common non-neoplastic lesion of the ovary is the cysts of ovary. Ovarian cysts may be either physiological or pathological. Physiological cysts are the follicular cysts and the luteal cysts. Ovarian tumor accounts for 3% of all cancers in females and about 23% of all gynaecologic tumors [10]. About 80% of ovarian cancer are benign and occurs most commonly in the young women between the ages of 20 and 45 years [1,10].

According to World Health Organisation (WHO), ovarian neoplasms are classified into 5 main categories based on the tissue of origin. They are surface epithelial stromal tumors, sexchord stromal tumors, germ cell tumors, malignant-not otherwise specified and metastatic cancer from non-ovarian primary [10]. Histopathology is essential for the diagnosis and classification of the ovarian tumors.

This study was conducted in the pathology department of SBMCH, Chennai to study the distribution of ovarian lesions in patients at SBMCH and to classify the different types of ovarian lesions of both cysts and tumors.

## MATERIALS AND METHODS

This is a retrospective study conducted in the department of pathology, SBMCH from August 2012 to September 2013. All the cases of ovary specimen sent for histopathological examination were included in the study. Clinical details were provided along with the specimen by the Obstetrics and gynaecologic department of the same hospital. The specimens were received in 10% neutral buffered formalin, processed and haematoxylin & Eosin staining done. Gross and Microscopic findings of these cases were analyzed.

## OBSERVATIONS AND RESULTS

There was a total of 80 cases of ovarian lesions studied during this one year period. The age ranged from 25 to 70 years with the mean age of presentation of 42 years. The youngest patient was a 25 year old female who was diagnosed as dermoid cyst histopathologically. The oldest patient was a 70 year old female who was diagnosed as benign serous cystadenoma with chronic salpingitis.

Among 80 cases of ovarian lesions, cystic lesion accounted for 22.5%. Benign ovarian tumor accounted for a majority of 72.5%, malignant tumor for 3.75%. 1 case of borderline seromucinous tumor was reported. Among the ovarian cysts 10 cases (12.5%) were found to be corpus luteal cysts and 8 cases (10%) were found to be follicular cysts. So a total of 18 cases of ovarian cysts were reported.

Among the benign tumors, simple serous cystadenoma accounted for the majority of 52.5%, followed by mature cystic teratoma (dermoid cyst) of 12.5%. Benign mucinous cystadenoma accounted for 2.5%.

3 cases (3.75%) of serous papillary cystadenocarcinoma were reported. 1 case of borderline seromucinous neoplasm of ovary was reported.

Bilateral ovaries were involved in 9 cases (11%).

## DISCUSSION

Ovarian cyst and tumor presents with different clinical appearance and behavior. Histopathology is essential to know the type of ovarian tumor based on the origin, which is a key to the treatment [2].

In our study, the incidence of benign tumor was found to be 72.5% and malignancy was 3.75%.

Cystic lesion accounted for 22.5% and borderline 1.25%. In a study by Jha *et al* , in the year 2008, the benign tumors were found to be 83.9% and malignancy were found to be 16.1% [5]. However in a study done by Ahmad *et al*, the incidence of benign tumors was 59.2% and malignancy was 40.8% [3].

In our study, the mean range of age was 25 to 70 years. Our study showed the peak incidence of ovarian tumors in age group 25 to 45 years which was comparable with study done by Kayastha *et al* where peak incidence of ovarian tumors was between 21 to 40years [4].

In a study done by Kayastha *et al* 66.7% cases of malignancy were seen in patients over 40 years which is in agreement with our study [4].

Out of total cases of ovarian cyst (both benign and malignant), bilateral involvement was found in 11% cases, which is in close agreement with the study done by Pudasaini *et al*.

In our study, the commonest type ovarian tumors according to WHO classification was surface epithelial tumors (61.25% ) which was comparable to several studies [2,3,7]. And among the surface epithelial tumors, serous cyst adenoma was the commonest one (58.75%) followed by mucinous cyst adenoma (2.75%).

In our study, mature cystic teratoma accounted for 12.5% which was the second most common tumor. However, in a study done by Prabhakar *et al* mature cystic teratoma was the third commonest tumor.<sup>7</sup> In our study, malignancy was seen in 3.5% Of cases. Serous papillary cystadenocarcinoma was the commonest and was seen in patients older than 40 years. This correlates well with other studies where maximum number of malignancy was seen in patient older than 40 years [3,5].

Corpus luteal cyst were found to be 12.5% in our study ,which is in agreement with the studies done by Pudasaini *et al* [9]. In a study done by Choi *et al*, corpus luteal cysts were the most common among hemorrhagic ovarian cysts [8].

**Table 1: Types of Ovarian Cysts and Tumors**

S.NO	TYPES	TOTAL (80 cases)
1.	Cysts –	
	corpus luteal cysts	12.5%
	follicular cysts	10%
2.	Benign	
	Simple serous cystadenoma	52.5%
	Cystic teratoma of the ovary(dermoid cyst)	12.5%
	Papillary serous cystadenoma	5%
	Mucinous cystadenoma of the ovary	2.5%
3.	Borderline seromucinous neoplasm of the ovary	1.25%
4.	Malignant	
	Serous papillary cystadenocarcinoma	3.75%

**CONCLUSION**

Though ovarian cyst and tumor can be diagnosed clinically, origin and nature of tumor cannot be determined clinically. Histopathological examination of the ovarian tumor is essential to find out the type of tumor based on the origin, which helps in the management of ovarian neoplasm.

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