



SPECTRUM OF OVARIAN NEOPLASMS OBSERVED IN A TERTIARY CARE HOSPITAL – A STUDY OF 90 CASES

Pathology

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ABSTRACT

Introduction : The ovary is third most common site of primary malignancy in the female genital tract, preceded only by endometrial and cervical cancer. Both benign and malignant tumours occur in the ovaries. The present study was done to know the various histopathological variants in ovarian lesions, the age incidence of various ovarian lesions.

Materials and Methods: A retrospective and prospective study of all the samples sent for histopathology for a period of two years during June 2016–May 2018 was done to assess the trend of ovarian lesions. Cases were analyzed in detail regarding complete history, clinical examination and other findings.

Results: Total of 90 ovarian lesions were studied and among them, 50 were non neoplastic lesions and 40 were neoplastic lesions. Among non neoplastic lesions follicular cyst was the most common lesion and predominantly they were bilateral followed by cortical stromal hyperplasia. The majority of the cases were seen in the age group 41-50 years.

Conclusion: Ovarian tumours are one of the major health problem in females. Their proper recognition is therefore important to allow appropriate, usually conservative therapy. Histopathological study plays a major role by which we can assess the staging and grading of the lesion which will be greatly helpful in the management of the disease thereby reducing the morbidity and burden associated with it.

KEYWORDS

Ovary, follicular cyst, dysgerminoma

INTRODUCTION

Ovarian malignancy is the second most common cancer of the female reproductive system and the leading cause of death from gynecologic malignancy.^{1,2} Incidence and prevalence of ovarian cancer vary in different geographical areas of the country. Indian trend analysis reveals a steady increase in the age-standardized incidence rate of ovarian cancer ranging from 0.26% to 2.44% per year in different area registries. It has worst prognosis among all gynecological malignancies and highest case fatality rate.

Unlike the other two female genital cancers, not much is known about the etiology of ovarian tumours. However a few risk factors have been identified which include: Nulliparity, heredity and complex genetic syndromes.

There is higher incidence of ovarian cancer in unmarried women and married with low or no parity. About 5% cases of ovarian cancer occur in women with family history of ovarian and breast cancer. Women with hereditary breast ovarian cancer susceptibility have mutation in BRCA gene. The risk in BRCA-1 carriers is higher compared to that in BRCA-2 carriers. Interestingly, men in such families have an increased risk of prostate cancer. In addition to BRCA mutation, other molecular abnormalities in ovarian cancers include mutation of TP53 tumour suppressor gene and over expression of ERBB-2 and K-RAS genes. Besides the above two main factors, several complex genetic syndromes are associated with ovarian tumours like Peutz-Jeghers syndrome, gonadal dysgenesis and nevoid basal cell carcinoma.³

MATERIALS & METHODS

The present study is a retrospective and prospective study, done in the department of Pathology for a period of three years. Total of 90 cases were collected and studied.

In the retrospective study, all the materials like blocks and slides available in the department were studied. In the prospective study, all the new cases admitted in the department of obstetrics and gynecology of the same institute were studied. The samples included the specimens from those patients who were treated and operated at the institute along with specimens from outside. The data was obtained which consists of the relevant information about age, clinical presentation, size of tumor, bilaterality, provisional diagnosis and operative findings.

RESULTS

Among the total 90 cases which were considered in our study, non neoplastic cases constituted highest number of cases (50) and neoplastic lesions constituted 40 cases. Among the non neoplastic cases follicular cyst was the most common entity and among neoplastic lesions, serous tumours constituted highest number of cases (22) [Table 1 & 2].

Age group between 41-50 years affected the most.

DISCUSSION

The ovary is a complex structure from an embryological, anatomical and functional standpoint. A detailed morphological study of ovarian lesions is of utmost importance in order to have a systematic diagnosis and planning the various treatment modalities as well as assessing the prognosis of the lesion. The ovary is the second most common site for cancer in the female pelvic reproductive organs, but it is associated with the highest mortality rate. These cases do not clinically manifest early and delayed presentation in either stage III or stage IV often leads to poor survival.

Sometimes the non-neoplastic lesions of the ovary can simulate neoplasms clinically. So it becomes mandatory to rely on its histopathological picture to differentiate between functional enlargement and neoplasia. Further the lesions in the paraovarian regions also mimic ovarian neoplasms and some of the secondary ovarian neoplasms are of greatest concern as they masquerade as primary ovarian tumours.

Although some of the tumours have distinctive features and are hormonally active, most are non-functional and tend to produce relatively mild symptoms until they have reached a large size. Malignant tumours have usually spread outside the ovary by the time a definitive diagnosis is made. Some of these tumours principally epithelial tumours, tend to be bilateral.⁴

Abdominal pain and distension, urinary and gastrointestinal tract symptoms due to compression by tumour or cancer invasion, and abdominal and vaginal bleeding are the most common symptoms. The benign forms are extremely asymptomatic and occasionally are unexpected findings on abdominal or pelvic examination or during surgery.

In the present study among the various nonneoplastic lesions, follicular cysts are the most common lesion followed by cortical stromal hyperplasia. In a study conducted by Kanthikar et al the most common non-neoplastic lesion observed was follicular cysts followed by corpus luteal cysts.⁵

Among the various neoplastic lesions, serous tumours are the most common neoplasms which is similar to the study done by Vaidya et al where most of the tumours were of serous type.⁶

Natural history and response to treatment vary considerably from one group of tumours to others, especially in the area of chemotherapy and radiotherapy. The best therapeutic approach may be highly specific, for

instance the dysgerminoma is extremely radiosensitive and curable with radiotherapy, even in the presence of metastasis.

Whereas in case of a malignant teratomas, a combination of chemotherapy has produced remarkable results. Accordingly, accurate histology has been often a critical factor in achieving an optimum treatment response. A detailed study of the histopathological patterns of ovarian tumors was done, in order to obtain some meaningful relationship between incidence and distribution of various types of ovarian cancers, the ultimate goal being better management.

The present study is done to know the various patterns of ovarian lesions including both neoplastic and non neoplastic lesions, to know the incidence and appropriate management.

Table 1: Showing various non- neoplastic lesions

Sl no	Type of lesion	Number of cases
1	Follicular cyst	25
2	Cortical stromal hyperplasia	11
3	Ovarian pregnancy	4
4	Torsion of ovary	4
5	Theca luten cysts	4
6	Kochs tuboovarian mass	2
Total		50

Table 2: Showing various neoplastic lesions

Serial number	Type of lesion	Number of cases
1	Serous tumours	22
2	Mucinous tumours	07
3	Benign teratoma	06
4	Granulosa cell tumour	02
5	Dysgerminoma	01
6	Embryonal cell carcinoma	02

Serous tumours are common cystic neoplasms are lined by tall, columnar, ciliated epithelial cells and are filled with clear serous fluid. Although the term serous appropriately describes the cyst fluid, it has become synonymous with the tubal like epithelium in these tumours. Together the benign, borderline and malignant types account for about 30% of all ovarian tumours.⁴

Mucinous tumours closely resemble their serous counterparts. They are somewhat less common, accounting for about 25% of all ovarian neoplasms. Germ cell tumours contribute 15% to 20% of all ovarian tumours. Most are benign cystic teratomas, but the remainder, which are found principally in children and young adults, have a higher incidence of malignant behaviour and pose problems in histologic diagnosis and in therapy.

CONCLUSION

The majority of the ovarian tumors has been observed between 41-50 years. The present study is done to analyze the various ovarian lesion and we observed that non - neoplastic lesions contributed a higher number of cases than neoplastic. Histopathological studies play a major role by which we can assess the staging and grading of the lesion which will be greatly helpful in the management of the disease thereby reducing the morbidity and burden associated with it. Their proper recognition is therefore important to allow appropriate, usually conservative therapy.

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