

The Histopathological Analysis of 122 Cases of Ovarian Lesions

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ABSTRACT

Aim: To outline various histopathological types of ovarian cysts received in our teaching hospital along with their prevalence and mode of presentation and to assess the proportion of physiologic versus pathological cysts and benign versus malignant ovarian cysts.

Duration of study: From Jan 2019 to March 2021.

Methods: Histopathology Department of Bakhtawar Amin Medical & Dental College & Hospital, Multan. A retrospective review of 122 ovarian lesions including physiological/functional cysts, pathological non neoplastic cysts as well as benign, borderline and malignant neoplasm. Histopathology reports of all ovarian specimens were reviewed and counted. Details like age, marital status, parity, presenting complaints, procedure opted, laterality, size, gross and microscopic details and final histological diagnosis etc were recorded. H&E stained slides of all cases were reviewed. In difficult suspicious cases, immunohistochemistry was also carried out. Percentage and proportions were calculated for all the variables. Relevant tables and charts were computed.

Results: A total of 122 ovarian specimens with some lesion were segregated in histopathology department of Bakhtawar Amin Hospital from 117 patients with 5 patients having bilateral lesions. The mean age was 33.2 years (ranging from 13-71 years). Most ladies presented between 25-45 years of age. Out of these 117 patients, 18 ladies were unmarried. Out of the 99 married, 12 were nulliparous. Sixty four ladies (54.7%) found to have cysts/neoplasm in right sided ovary, forty eight (41%) presented with left sided ovarian involvement and 5 (4.3 %) presented with bilateral ovarian lesions.

Conclusion: Non neoplastic ovarian cysts are more frequent as compared to neoplastic masses. Histopathological diagnosis is mandatory for final confirmatory diagnosis.

Keywords: Ovarian lesions, reproductive cells, cyst

INTRODUCTION

Ovaries are twin reproductive glands in females that can hold a variety of physiological and pathological lesions which are further divided into neoplastic and non neoplastic. These lesions can appear in any age but are most frequently seen in reproductive age.⁵

Functional cysts form a major bulk and often resolve spontaneously and hardly need any management.⁶

The commonest pathological cysts are endometriotic cysts and dermoid cysts along with polycystic ovarian syndrome. These cysts along with the functional cysts can lead to infertility in females.^{7,8}

Among the neoplastic cysts, a vast majority is of benign type and usually arises in young ladies. However, malignant ovarian lesions usually happen to be in elderly and post menopausal females.⁹

The exact incidence of ovarian cysts is ambiguous and differs significantly in various regions of the world because of inconsistent medical records and increase probability of spontaneous regression. In USA and Europe several studies reveal the prevalence between 5% to 21%.¹⁰

The prevalence is up to 50% in women with irregular menstrual cycle⁵.

The study by Bhushan S indicates that every fourth woman in India is suffering from polycystic ovary syndrome.¹¹

In Pakistan, the definite incidence of ovarian cysts and tumors is difficult to be established because of inconsistent reporting, lack of awareness and research work in various regions.

However, according to several studies, the ovarian malignancy lies under top 5 malignancies among Pakistani and Indian women.^{12,13}

The objective of this study is to assess and analyze ovarian specimen received in histopathology laboratory of our teaching hospital and to ascertain the variety of ovarian cysts and tumors in respect to their prevalence and mode of presentation.

MATERIAL AND METHODS

A retrospective review of 122 ovarian lesions including physiological/functional cysts, pathological non neoplastic cysts as well as benign, borderline and malignant neoplasm. This study was conducted in Histopathology Department of Bakhtawar Amin Medical & Dental College & Hospital, Multan from Jan 2019 to March 2021.

Histopathology reports of all ovarian specimens were reviewed and counted. Details like age, marital status, parity, presenting complaints, procedure opted, laterality,

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size, gross and microscopic details and final histological diagnosis etc were recorded.

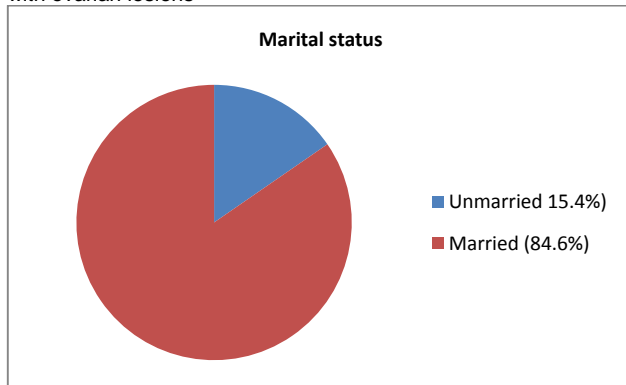
H&E stained slides of all cases were reviewed. In difficult suspicious cases, immunohistochemistry was also carried out. Percentage and proportions were calculated for all the variables. Relevant tables and charts were computed.

RESULTS

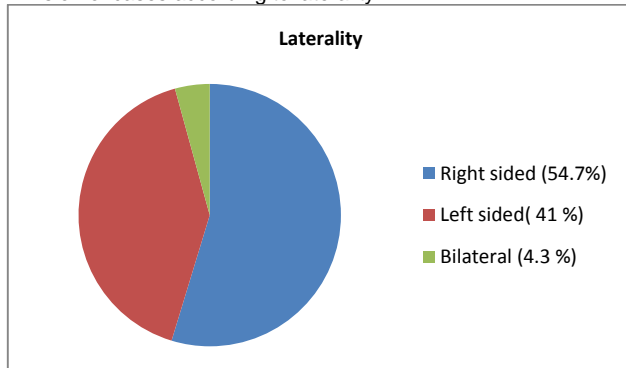
A total of 122 ovarian specimens with some lesion were segregated in histopathology department of Bakhtawar Amin Hospital from 117 patients with 5 patients having bilateral lesions. The mean age was 33.2 years (ranging from 13-71 years). Most ladies presented between 25-45 years of age. Out of these 117 patients, 18 ladies were unmarried. Out of the 99 married, 12 were nulliparous. Sixty four ladies (54.7%) found to have cysts/neoplasm in right sided ovary, forty eight (41%) presented with left sided ovarian involvement and 5 (4.3 %) presented with bilateral ovarian lesions. Most common presenting complaint was abdominal pain and discomfort, followed by menstrual irregularity and infertility. The size ranges between 2.5 cm to 26 cm diameter.

Non neoplastic cystic lesions were more common (68/122, 55.7 %) than neoplastic (54/122, 44.3%) ovarian lesions. The most frequent non neoplastic cyst encountered was follicular cyst (29/68, 42.6%) followed by endometriotic cyst (26/68, 38.2%) and luteal cyst (13/68, 19.2%).

The percentage ratio of married and unmarried ladies presenting with ovarian lesions



Division of cases according to laterality



Frequency of ovarian cysts and tumors on histopathology

Histopathological diagnosis	n	%age
Follicular cyst	29	23.8
Luteal cyst	13	10.7
Endometriotic cyst	26	21.3
Benign serous cystadenoma	21	17.2
Benign mucinous cystadenoma	8	6.6
Fibroma	10	8.2
Mature cystic teratoma	7	5.7
Borderline serous cystadenoma	01	0.8
Borderline mucinous cystadenoma	01	0.8
Adult granulosa cell tumor	02	1.7
Serous cystadenocarcinoma	01	0.8
Mucinous cystadenocarcinoma	01	0.8
Endometrioid carcinoma	01	0.8
Krukenberg tumor	01	0.8
Total	122	100

The neoplastic (54/122, 44.3%) ovarian tumors in our study comprise of benign (46/54, 85.2%), borderline (2/54, 3.7%) and malignant (6/54, 11.1%). Epithelial tumors (serous type) were the most commonly diagnosed; out of which benign serous cystadenoma encompass (21/54, 38.9%), followed by mucinous tumors.

The majority of malignant tumors in our study were also of epithelial type.

Three young patients presented with acute abdomen found to have ovarian cyst torsion.

In most of the cases laparoscopic cystectomy was done. For patients who are not fit for laparoscopy and patients with larger masses, conventional laparotomy was opted. Several cysts were sent as a part of total abdominal hysterectomy with salpingo-oophorectomy.

DISCUSSION

Ovarian cysts are frequently detected lesions in ladies of all ages. Mostly they are found incidentally; and often manifest with mild non specific symptoms.¹⁴

The most common presenting complaint in our study was abdominal pain and discomfort, similar to several other studies.^{15,16,17}

A vast majority of patients in our study were between age group 25-45 years in accordance with study by Prakash A.¹⁸

The mean age in our study was 33.2 years comparable with mean age of 35.7 years in study by Gupta A.¹⁹

Most of the malignant cases were seen in elderly ladies. All other physiological and non neoplastic pathological cyst and benign ovarian tumors were found to be in young women. This is consonant with other studies.¹⁴

In our study most of the ovarian lesions were found in right side. This is in accordance with the studies by Abduljabbar HS et al and Batool A.^{16,9}

Non neoplastic lesions were more common (55.7%) in our study as compared to neoplastic masses (44.3%).The studies by Kanasagara A and Zaman S et al reveal similar results with 58% and 68.87% non neoplastic cysts and 42% and 31.12% neoplastic lesions in their studies respectively.^{20,21}

However, in the study by Zaman S et al, luteal cysts were more common as compared to follicular cysts. This is opposite to the results in our study. Here most functional

cysts appeared to be follicular, consistent with studies by Prakash A, Kanasagara A and Dhakal R.^{18,20,22}

Physiological cysts were the most frequently encountered ovarian pathologies in our study followed by benign cystadenomas and endometriotic cysts. Similar results are seen in a study conducted in Saudi Arabia. The percentage of functional/physiological cysts in our study was 34.4 %, similar to study by Abduljabbar HS et al where the incidence of functional cysts found to be 33.2%.¹⁶

Serous cystadenoma was the most commonly encountered benign tumor in our study followed by mucinouscystadenoma, similar to study by Neelgund S.¹⁴

CONCLUSION

Non neoplastic ovarian cysts are more frequent as compared to neoplastic masses. Histopathological diagnosis is mandatory for final confirmatory diagnosis.

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