



Clinico-Histopathological Analysis of Non-Neoplastic Lesions of Ovary at Tertiary Care Centre

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Abstract

Ovary being a hormone producing organ is the commonest site of neoplastic as well as non-neoplastic lesions. The affected age may be childhood or up to postmenopausal^(1,2).

The present study was done to analyse the frequency, spectrum, clinical features of ovarian non neoplastic lesions and their histopathological correlation.

This is a retrospective study of 177 ovarian lesions at tertiary care hospital over a period of 3 years. All the relevant data of patients were analysed from medical record department of TSM Medical College and Hospital, Lucknow.

The total number of non-neoplastic ovarian lesions studied during 15 July 2015 to 15 July 2018 was 177 and amongst them the most common lesion seen were functional cysts.

Introduction

Ovaries are egg as well as hormone producing organ and as part of female reproductive system located in the lower abdomen on both sides of the uterus.

Ovarian non neoplastic lesions present a great challenge to gynaecologist and pathologist as they are asymptomatic and difficult to diagnose at early stages. Non neoplastic lesion of the ovary frequently form a pelvic mass & are often associated with abnormal hormone related

manifestations and so mimic an ovarian neoplasm⁽³⁾; so their proper recognition and management is important. Diverse histopathology are common in ovarian lesions making it more complex to diagnose and treat.

This study was conducted to find out the histopathological patterns of ovarian non-neoplastic lesion in patients attending tertiary care centre in Lucknow region, UP. This study focuses on non-neoplastic lesions only, as the knowledge of incidence, age, preponderance, clinical &

histopathological features will be useful in avoiding surgical removal of ovary especially in infertile women where it is needed to be retained; rather than neoplastic lesion where anyways surgical removal is the line of management.

Material and Methods

We carried out a retrospective case series study and review of all cases of non-neoplastic ovarian lesions diagnosed for which surgical oophorectomy was done at the department of Obstetrics & Gynaecology T S M Medical College & Hospital, Lucknow between July 2015 to July 2018.

Sample was analysed in the pathology department according to detailed macroscopy for various parameters like size, external surface, consistency, cut surface and content which came out after grossing. Ethical approval was obtained from the Institutional ethical committee. The study included 177 cases diagnosed as non-neoplastic ovarian lesions. The relevant data was collected from medical record department of TSM Hospital included age, clinical features, marital status, pregnancy as well as histopathology and sonography reports.

In addition, asymptomatic women found to have an ovarian lesion as an incidental findings on USG examination for other reason such as pregnancy were also included in our study⁽⁴⁾.

Abdominal pelvic masses other than ovarian lesion as well as neoplastic ovarian lesions, diagnosed on histopathology were excluded from our study. Number of lesions, unilateral, bilateral, simple, complicated, types (inflammatory lesion or cystic lesion like functional, simple, clear) were all recorded. Finally, how they were managed either by laparoscopy or laparotomy was documented.

Results

During the study period July 2015 to July 2018, one hundred & seventy seven cases of ovarian non-neoplastic lesions were selected; ages of patients & their histopathological diagnosis were

recorded. Out of 177 patients status of 148 patients was married, of which 26 were pregnant. Patients were divided according to age groups from 11 years to 80 years with the difference of 10 years in each group.

The commonest age group affected was from 21 to 30 years followed by 31 to 40 years. The youngest patient was 14 years old & oldest was 71 years. In our study most of the patients presented to the OPD with more than one complains^(3,5). The most common clinical presentation was abdominal pain with feeling of fullness in 82 (46.3%) cases. Acute severe pain can occur in complicated ovarian cyst, torsion, infarction or haemorrhage. The most common type of lesion was Functional cyst (50.2%) followed by simple serous cyst (18.1%).

Table No 1 Age Wise Distribution

Age group	No. of cases	Percentage
11-20	20	11.3 %
21-30	75	42.4%
31-40	30	16.9%
41-50	27	15.3%
51-60	18	10.2%
61-70	06	3.4 %
71-80	01	0.6 %

Table No 2 Demographic Characteristics

Clinical Presentation			
	Abdominal Pain	82	46.3%
	Menstrual Irregularities	34	19.2%
	Abdominal Swelling	29	16.4%
	Incidental Findings	22	12.4%
	Infertility	18	10.2%
	Constitutional Symptoms	42	23.7%
Marital Status			
	Married	148	83.6%
	Unmarried	29	16.4%
Pregnancy			
	No	131	74.0%
	Yes	26	14.7%
	Not Applicable	20	11.3%
Location/site			
	Right	108	61.0%
	Left	60	33.9%
	Bilateral	09	5.1%
Appearance (predominantly)			
	Cystic	142	80.2%
	Solid	25	14.1%
	Partially cystic/solid	10	5.6%
Removed by			
	Laparoscopy	106	59.9%
	Laparotomy	71	40.1 %

Table no 3. Type of Lesion

Follicular Cyst	46	25.9 %
Luteal Cyst	43	24.3 %
Simple Serous Cyst	32	18.1 %
Inclusion Cyst	12	6.8 %
Hemorrhagic Cyst	09	5.1 %
Oophoritis	24	13.6 %
Endometriosis	11	6.2 %

Discussion

Ovary is a complex structure from anatomical, embryological, histological & functional point of view. In view of non-neoplastic lesion overall cystic lesions are common in reproductive age group but less frequent in menopausal and peri menopausal age group^(3,4,5). It can occur at any age but in our case the youngest patient was 14 years old and oldest patient was 71 years old. Follicular cysts are smaller than 2.5cms & usually asymptomatic affecting predominantly younger age group^(1,2). Inclusion cysts are common in older age group & are usually small & multiple^(5,6). Luteal cysts may be associated with Hydatidiform Mole/Choriocarcinoma/Twin pregnancy⁽⁵⁾.

Luteoma of pregnancy used to regress after delivery if left undisturbed.⁽⁷⁾ All the reported cases were benign.⁽⁸⁾ Luteal cysts vary in size and may be up to 25cms in median diameter⁽⁹⁾. Fluid content is often bloody & hemorrhage into the peritoneal fluid may mimic ruptured ectopic.⁽¹⁰⁾ Non specific inflammation of ovary usually spread from endometrium & is always associated with tubal involvement. Oophoritis cases usually affect younger generation, whether Xanthogranulomatous or Granulomatous lesion, this may be due to tuberculosis or foreign body. Foreign body granulomas can occur in the ovarian surface secondarily to talc, carbon pigment or any other foreign body materials.⁽¹¹⁾ In the cases of Endometriosis where the Endometrial glands & stroma is present in ovary, infertility is usually associated.^(12,13,14) In cases with extensive involvement, the entire ovary may be converted into a 'Chocolate cyst' as a result of repeated hemorrhage.

It was found that the clinical features of patients having non neoplastic lesions are correlated well

with final pathology. Our study shows that the maximum incidence of ovarian masses are in between 21 to 40 years of age; this differs from western data where it is between 50 to 70 years, but correlates well with other studies conducted in India.^(17,18,19,20)

In our study cystic lesions were 142(80.2%); of all non-neoplastic lesions of ovary included in the study. These results correlate with other studies in India. The pattern of distribution of cystic lesions is quite variable in other studies. Our studies showed functional cysts were common than any other. Acute severe pain can occur in complicated ovarian cyst, torsion, infarction or haemorrhage.

In our study maximum cases were in the age group of 21-30 years, which is same as mentioned in Indian studies^(15,16), but differs from western data where the patients of age group between 51-70 years are mostly affected.^(17,18,19,20)

Furthermore, study reported by Ameena A et al⁽¹⁵⁾ the most common non neoplastic lesion was Luteal cyst (44.7%) followed by Simple serous cyst (35.3%); while in our study it is 24.3% & 18.1% respectively and most common is Follicular cyst (25.9%). According to Gupta N the most common non neoplastic lesion is Follicular Cyst & Corpus Luteal cysts (80%) which is 50.2% in our case and in inflammatory lesion tuberculosis was reported in 2.9% cases but in our study total inflammatory lesions are 13.6% including Tubercular & Xanthogranulomatous.

The pattern of distribution of non-neoplastic lesions are quite variable in other studies, for example the incidence of endometriotic cysts were 3% & 20% respectively, while in our study it is 6.2%. Hemorrhagic cysts were 80% & follicular cysts 27.9% but our study shows this is 5.1% & 25.9% respectively. Treatment of ovarian lesions with laparoscopy was found to be safe & effective method in young females if confirmed that the lesion is benign by clinical & radiological correlation.

Conclusion

An ovarian lesion is a common gynaecological problem. Benign lesions are more common in young females. Most ovarian lesions are asymptomatic & disappear spontaneously. When ovarian cysts are large, these can cause abdominal discomfort, pelvic pain, dysmenorrhoea. According to our study ovarian lesions are very common in reproductive age group of 21 to 40 years. Cystic lesions are more common than inflammatory. Functional cysts are more common than any other type (50.2%). Monitoring using serial ultrasonography was carried out in women with simple ovarian cysts smaller than 5cm in diameter & a normal CA125. Our study is institutional based & at tertiary care level so the results obtained here may or may not represent the actual histological patterns of ovarian lesions in Indian women.

However awareness among public & doctors, educating women especially having rural background as well as screening at community level will be helpful in early detection of the ovarian lesions.

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