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Study of 60 Cases of Ovarian Masses in a Tertiary Care Centre

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Abstract
Aim: *To find the symptomatology, age distribution, parity wise and histopathological findings of ovarian masses underwent surgery.*
Method: *Retrospective analysis of 60 cases who were operated.*
Result and Conclusion: *Among the 60 cases of ovarian masses operated 47(78.33%) were benign, 13 (21.66%) were malignant. 63.33% women with ovarian mass belong to age group of 21-40 years. . 25 % cases had torsion. Most common benign cyst associated with torsion was dermoid cyst. 58.33% women with ovarian mass presented with complaint of pain abdomen which is the most common symptom.*
Keywords: *Ovarian mass, fucntional, clinical evaluation and histopathology.*

Introduction

Ovarian masses can be benign, malignant or functionally symptomatic cyst. Since ovarian volume is related to n age, menopausal status, weight, height and use of exogenous hormones[1]. Major of malignant masses are seen in post-menopausal women and benign masses in premenopausal[1]. The vast majority of ovarian cysts in women of reproductive age are physiological (functional) either follicular cysts or cystic corpus luteum[2]. Functional masses increases after menarche. The rise of malignant neoplasms is lower among adolescents[1]. Overall incidence of a symptomatic ovarian cyst in premenopausal women being malignant is approx 1 in 1000 which increases to 3 in 1000 at age of 50[3].

Cystic abdominal tumors are extremely common and now they are diagnosed more frequently and earlier due to availability of better imaging modalities. Now a days ovarian cysts rarely grow immense due to fact that ultrasound scanning

permits early detection and appropriate treatment[4]. Functional ovarian cyst may be an incidental finding on examination or may be associated with pain[1]. Pain can present as dull ache or pain in the lower back or abdomen. S

Although ovarian cancer is notoriously difficult to diagnose at any early stage, the concept that it is frequently asymptomatic is challenged. Symptoms may include back pain, fatigue, bloating, constipation, abdominal pain and urinary symptoms. These symptoms are of greater severity and more recent onset in ovarian malignancy. Positive predictive value these symptoms is not high[1]. Ovarian cancer is the seventh most common cancer in women worldwide (18 most common cancer overall), with 239,000 new cases diagnosed in 2012[6]. Fourth leading cause of death due to cancer in women and seen predominantly after 3rd decade[7].

Aim

This study is aimed to find the symptomatology, age distribution, parity, histpathological examination findings of ovarian masses cases underwent surgery.

Method

This is the retrospective analysis of 60 patients with ovarian masses at Government Medical College Kota, Rajasthan. All patients of ovarian masses who were surgically managed are included in this study.

Patients with paraovarian cyst, ovarian masses with GIT lesions, endometrial carcinoma, cervical carcinoma were exclued from the study. The details such as age, presenting symptoms, intraoperative findings and histopathological reports collected from pathology department were noted. Based on the histopathological reports of ovarian masses, age, parity, symptoms, complications were analysed.

Result

Based on Histopathological report

Nature of mass	Number	Percentage (%)
Benign	47	78.33
Malignant	13	21.66
1 Serous adenoca rcinoma	9	15
2 Mucinous adenocarcinoma	2	3.33
3 Germ cell tumours	2	3.33

In our study of 60 cases 78.33% (47) were found to have benign cystic mass. 21.66 % (13) women had malignant mass. Out of 9 malignant masses 9 women diagnosed with serous adenocarcinoma. 2 were diagnosed with mucinous adenocarcinoma and remaining with dysgerminoma.

Age distribution

Age group (years)	Number	Percentage(%)
<20	8	13.33
21-40	38	63.33
>40	8	13.33
postmenopausal	6	10

63.33% (38) women with ovarian mass belong to age group of 21-40 years. Incidence of ovarian mass was found to be equal in age groups of <20 years and >40 years.

3) Parity

Parity	Number	Percentage(%)
Nullipara	10	16.66
Multipara	28	46.66
Primi/multipara + pregnancy	6	10
Unmarried	6	10

Ovarian masses were commomly seen in multipara 46.66% (28). 10% of ovarian cysts were seen in women who were pregnant. 10% benign masses were reported in unmarried females. None of these unmarrried, teenage girls were diagnosed with malignancy.

4) Symptoms

Symptoms	Number	Percentage (%)
Pain abdomen	35	58.33
Pain abdomen+ bleeding per vaginum	12	20
Lump abdomen	11	18.33
Nausea and vomiting	7	11.66

58.33% (35) women came with complaint of pain abdomen. 20% reported with complaint of pain abdomen and bleeding per vaginum. 18.33 % had complaint of lump abdomen/distension. 7 women came with complaint of nausea and vomiting and 4 women were diagnosed accidently.

5) Complications

Complications	Number	Percentage(%)
Torsion	15	25
Rupture	2	3.33
Hemorrhage	6	10
Infection	2	3.33
Infertility	6	10
Ascitis	10	16.66
Adhesions	5	8.3

Most common complication associated with benign lesion was torsion (25%) followed by hemorrhage (10%) and infertility (10%). In malignant cases 10% had ascitis and 5% cases had multiple adhesions in peritoneal cavity. 35 % cases of ovarian mass had no complication.

Discussion

Functional ovarian cysts are common in women of reproductive age group but rare after menopause[5]. Ovary is a dynamic complex structure in embryology, histology, stereoidogenesis with its potential for malignancy with its different components like germ cells, follicular cells and mesenchymal tissue each having diffuse capability to form various tumour[8].

In our study of 60 cases, 78.33% had benign ovarian mass. 21.66% had malignant mass. In contrast to study done by soumini G et al in Aug 2015 84.16% were neoplastic and 15.84% were non-neoplastic[8]. In a study of Ruchika garg et al 44% cases were malignant[9].

In our study most common symptom was pain abdomen 58.33%. 20% women had complaint of bleeding per vaginum along with pain abdomen. 18.33% presented with lump abdomen/distension and 6.66% cases found accidently. In a study of Ruchika et al the malignant tumours presented with abdominal distension were 73%, abdominal pain 52%, constitutional 21.5%, gastrointestinal symptoms 10.5%[9]. In a study of ovarian tumours done by Yogambal, Arunalatha in South India commonest symptom was pain abdomen (66.92%) followed by mass abdomen 28.11%[10]. Same supported by Rashid et al in which abdominal pain was the commonest presenting complaint (50%) followed by abdominal mass/distension (37%)[11]. In contrast, another retrospective analyses by Jamal et al the commonest mode of presentation was bleeding per vaginum followed by abdominal pain, pelvic mass and gastrointestinal symptom[12]. In a study done in Saudi Arabia in 2015 most common symptom was abdominal pain[5].

In our study Benign cystic masses were more commonly associated with multipara(46.66%), 10% benign masses reported in unmarried. Nulliparity associated with 10% cases. Same supported by Ruchika garg et al[9]. 6 cases out of 60 had pregnancy associated with ovarian cyst. The incidence of ovarian cyst in pregnant women was 1 out of 600 done by Hassan S.Abduljabbar in Saudi arabia[5]. In study of Ruchika et al multiparity was associated with 27.3% malignant masses[9].

In our study majority of ovarian masses (63.33%) present in reproductive age group. Scully et al described about 2/3rd of ovarian tumours in reproductive age group and <5% in children[13]. In study of Ruchika et al 77.3% malignant ovarian tumour found in reproductive age group while 13.6% occurred in postmenopausal women[9]. In a study done by Kantihikar SN, Dravid NV 78.5% cases were benign, 1.92% was at borderline and 20% cases were malignant[14]. Most of the benign tumors were observed in the age group of 20-40 years while most malignant tumors were common in elderly(>40 years).

In our study most common complication associated with benign lesion was torsion 25% (15) followed by hemorrhage 10% (6) and infertility 10%(6). Cyst was ruptured in 2 cases. 2 were associated with infection. In Soumini G. et al study twisted ovarian cyst was commonest surgical emergency in 23 cases (5.91%) followed by cyst rupture with haemoperitoneum (6%)[8]. S.maharajan observed torsion in 6.7% and cyst rupture with haemoperitoneum in 6 %[15]. Cass.et al observed torsion in 55% neoplastic and 47% non-neoplastic ovarian masses[16].In our study of ovarian masses 10% cases had ascitis and 5% cases had multiple adhesions in peritoneal cavity. 35 % had no complication. In a study of Ruchika

garg et al 40.9% cases of maligancy had ascitis[9]. Shen gunther and Mannel found ascitis in 42% cases[17].

Conclusion

In all 60 cases operated for ovarian masses 78.33% were benign and 21.66 % were malignant. Out of malignant 69.23% were serous adenocarcinoma which is the most common malignant tumor. Mucinous adenocarcinoma and germ cell tumour share equal rank with 15.38%. 63.33% women with ovarian mass belong to age group of 21-40 years. 2 cases of dysgerminoma present in age group of 21-40 years. Serous and mucinous adenocarcinoma were found in age group >60 years. 25 % cases had torsion. Most common benign cyst associated with torsion was dermoid cyst. 58.33% women with ovarian mass presented with complaint of pain abdomen which is the most common symptom

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