Original Article

An Experience of Ovarian Cysts/ Tumors over a Period of Two Years

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Abstract

Objective: To observe the various presentations, clinical course and outcome of patients presenting with ovarian cysts/ tumors **Study Design:** Observational study. **Study Period:** March 2010-March 2012. **Setting:** Department of Obstetrics and Gynaecology, Punjab Employees Social Security Hospital (PESSI), Islamabad. **Methods:** Thirty one patients presented in Gynae department with ovarian cyst/ tumor or incidentally found to have a cyst during work up for other problems were included in the study. Their clinical presentations, associated problems, course of their management and out comes were observed. The histopathology reports of the surgically managed patients were also collected in the data. **Results:** Most of the patients were in reproductive age group and multipara. The commonest presentation was acute abdominal pain in 12 (38.70%) patients, followed by chronic pelvic pain in 7 (22.58%) patients, menstrual problems in 4 (12.90%), patients and postmenopausal bleeding in 3 (9.57%). two (6.45%) patients were incidentally found to have complex ovarian cysts during work up for infertility. Another 6.45% patients presented with enlarged ovaries with multiple clear ovarian cysts as a result of ovulation induction. Two patients had adenocarcinoma. Out of them, one presented with recurrence. Corpus luteal cyst was the commonest histopathological diagnosis (55%), followed by endometrioma (44%). Ten patients (32.25%) were managed conservatively, while surgery was performed in 21 (67.75%) patients. **Conclusion:** Ovarian cysts are common in reproductive age group. Most of them are benign and respond to conservative management, provided they are clear, with no signs of acute complications in these cases. Unnecessary surgery can be avoided with proper monitoring and selection of patients. Surgery is mandatory however in post- menopausal age group because of increased chances of malignancy. **Key Words:** Ovarian cyst, corpus luteum, endometriosis, postmenopausal bleeding.

INTRODUCTION

Benign ovarian cysts are common, often asymptomatic and usually resolve spontaneously. They make up the 4th commonest gynaecological cause of hospital admissions. 90% of all ovarian cysts are benign.[1] Follicular cysts are the commonest followed in frequency by luteal cysts. Most of them do not necessarily require active intervention.[1] In premenarchal age group, almost all adnexal masses are neoplastic and may be malignant and require urgent evaluation and treatment if symptomatic.[2] Most functional or benign masses occur in the reproductive age group. These include cystic masses associated with anovulation, manifestation of endometriosis or benign neoplasm such as dermoid.[2, 3, 4,] Only 3% dermoids are malignant, but if they occur in less than 20 years age group, 33% are malignant.[1] Mucinous/serous cystadenomas are other common types in the reproductive age group.[1] In post-menopausal patients, all palpable adnexal masses are neoplastic in origin and must also be evaluated promptly. However, simple cysts are fairly common among post-menopausal women and most of them resolve spontaneously.[5] USG, TAS and TVS both, MRI and CT scan are valuable diagnostic tools. Color Doppler has been recommended to improve diagnostic assessment of benign and malignant masses. TVS is more sensitive but less specific as unable to differentiate between benign and malignant disease.[6, 7, 8]

MATERIALS AND METHODS

An observational study was conducted in Obs/ Gynae department of PESSI hospital, Islamabad. A total of 31 patients were included in the study.

INCLUSION CRITERIA

1. Premenarchal girls with adnexal mass of any size
2. Reproductive age group patients with ovarian cysts more than 5cm/ complex adnexal mass
3. Post menopausal patients with adnexal mass of any size.

Their pelvic ultrasonography was done to see the size of the cysts, echolucency, bilaterality, presence of solid areas and other associated features like presense of ascites. Tumor markers were performed in 12 patients based upon their age, clinical presentation and ultrasound features of the cyst. Those selected for conservative management had their ultrasound repeated after an interval of 4- 6 weeks. Data was collected from the departmental admission/ surgery record registers and patient's indoor records. Histopathology reports were collected from the laboratory records/ post-operative follow up of the patients.

RESULTS

Out of the 31 patients, 3 (9.67%) were premenarchal young girls, 25 (80.64%) were in reproductive age group and 3 (9.67%) were postmenopausal. 7 (22.58%) were nullipara, 21 (67.74%) were multipara and 3 (9.67%) were grand multipara. As far as presenting complaints of the patients are concerned, commonest presentation was acute abdominal pain in 12 (38.70%) patient. Out of these 12 patients 1 was at 6+ week's gestation and was mistakenly given the impression of a ruptured ectopic gestation on ultrasound. Other presentations were chronic pelvic pain in 7 (22.58%) patients, menstrual problems in 4 (12.90%) and postmenopausal bleeding in 3 (9.67%) patients. Two (6.45%) patients were incidentally found to have complex ovarian cysts during work up for infertility, another 6.45% patients presented with enlarged ovaries with multiple clear ovarian cysts as a result of ovulation induction.One (3.22%) was a known patient of ovarian adenocarcinoma who came with recurrence.

Tumor markers included CA- 125 in 4 patients, AFP (alpha fetoprotein) in 3, CEA (Carcino embryonic antigen) in 1 and hCG (human chorionic gonadotrophin) in 4 patients. They were all unremarkable except for raised hCG in patient at 6+ week's gestation.

Various management options utilized were conservative in 10 (32.25%) patients, cystectomy in 5 (16.12%), oophorectomy in 6 (19.35%) emergency laparotomy with suspicion of ruptured ectopic in 1 patient who was found to have ruptured corpus luteum. Full staging laparotomy with TAH and BSO was done in 7 (22.58%) patients and 2 patients were referred to oncologist for chemotherapy. Those selected for conservative management had their ultrasonography done at an interval of 4-6 weeks. Most showed resolution of the cyst/ significant reduction in size of the cyst.

Table I shows the presenting complaints of the patients, and table II shows histopathology reports of surgically managed patients:

Figure-1

Mucinous cyst adenoma in a postmenopausal lady: 9-12-10

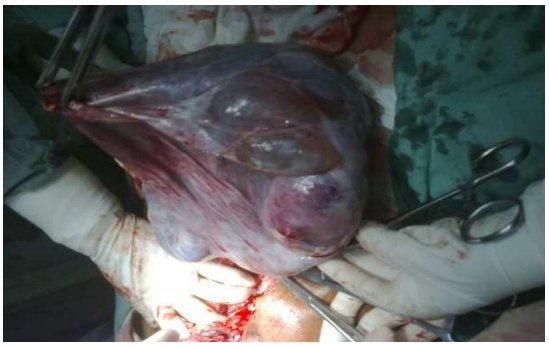

Figure-2

Ovarian cyst torsion in a 10 year old girl operated on 29-2-12

Figure-3
Ovarian cyst torsion in a 22 year old lady, operated on 9-9-10

Table-1
Presenting complaints

Presenting complaints	Number	Percent
Acute abdomen	12	38.70%
Chronic pelvic pain	7	22.58%
Subfertility	2	6.45%
Menstrual problems	4	12.90%
Post- menopausal bleeding	3	9.57%
Mass abdomen (recurrence)	1	3.22%
Ovarian hyperstimulation	2	6.45%
Total	31	

Figure-3
Histopathological type of the cyst among surgically managed patients

Histopathology	Number	Percent
Teratoma	3	15%
Serous cystadenoma	2	10%
Mucinous cystadenoma	2	10%
Endometrioma	8	40%
Corpus luteal cyst	3	15%
Adeno carcinoma	2	10%
Mesenteric cyst	1	5%
Total	21	

DISCUSSION

Most of the patients in our study group were in the reproductive age group (80.64%). Acute abdominal pain was the commonest presentation (38.70%). Simple ovarian cysts are common in reproductive age group and may persist for many cycles. They can attain a size up to 10 cm in diameter.[1] Corpus luteal cysts usually present as a result of intraperitoneal bleed that is why; acute presentation with a pelvic mass is quite common. Pain may be caused by haemorrhage or torsion of a mass or pressure on surrounding organs by enlarging mass. A rapidly growing mass may undergo central necrosis or infarction as a result of which the patient may experience intraperitoneal bleeding with pain and signs of peritonitis. However, most of the simple cysts may respond well to conservative management as in 10 (32.25%) patients in this study. These patients were given analgesics and antibiotics. Their ultrasonography was repeated after 4- 6 weeks interval. Most of them had complete resolution of their symptoms as well as complete disappearance or significant reduction in the size of the cyst. Unnecessary surgery was thus avoided in a significant number of patients by proper clinical evaluation and selection of the patients. Ectopic pregnancy is another cause of acute presentation with a pelvic mass especially when there has been chronic intraperitoneal bleed. Often ruptured corpus luteum is taken as an ectopic gestation as shown in the results. One patient who presented at +6 weeks gestation was mistakenly diagnosed as ectopic pregnancy due to pain of ruptured corpus luteum.

In the rest of the patients, 3 (9.67%) were young premenarchal girls and a similar number were old post-menopausal ladies who presented with post-menopausal bleeding and abdomino pelvic mass.Out of the three premenarchal girls, one was mistakenly diagnosed to have ovarian cyst, and upon laparotomy, the cyst was actually mesenteric. The other two had acute abdomen due to torsion of a simple ovarian cyst. Dysgerminoma is cited to be the commonest in some studies in prepubertal age[2]. A pelvic mass of ovarian origin may be hormonally active. Estrogen secreting tumors of the ovary may initially present with abnormal uterine bleeding or post-menopausal bleeding due to endometrial hyperplasia.[9] Ultrasonography is a primary imaging modality used to identify and characterize adnexal masses.[10, 11]Most benign ovarian tumors are cystic and presence of solid areas in the tumor makes malignancy more likely, however, in reproductive age women, corpus luteal cysts or endometriomas may have a complex appearance on USG, and CA-125 is often mildly raised. In these cases, a repeat scan in three months period is advised. Surgical management is indicated if mass persists. Tumor markers were performed in 12 patients but they were unremarkable except for raised hCG in patient who presented in early pregnancy. CA- 125 is

raised in 80% of patients with epithelial ovarian cancer but in only 50% of early stage tumors. It is also variably raised in a variety of other conditions like peritonitis, fibroid, endometriosis and even in normal menstruation. So does not have a good sensitivity or specificity in asymptomatic early stage tumors, rather it has got a good prognostic value. USG, TAS and TVS both, with or without colour Doppler, MRI and CT scan are valuable diagnostic tools for evaluation of adnexal masses. Among surgically managed patients, again corpus luteal cyst was the commonest histopathological type observed in 55% of them followed by endometriotic cysts in 40%. Endometriosis is frequently associated with chronic pelvic pain and subfertility. Two patients had serous cyst adenoma and a similar number had mucinous cyst adenoma. Seouscystadenomas are the commonest epithelial tumors in reproductive age group, followed by mucinous cystadenomas.[3]

Serous tumors are usually unilocular cysts and bilateral in 10% cases. Although benign epithelial tumors tend to occur more likely ten years earlier than their malignant counterparts, they are most common in women of less than 40 years. Contrary to this finding, two patients who presented with huge mass about 32 weeks size, and the other with acute abdomen, both were post- menopausal but their histopathology turned out to be mucinous cyst adenoma. 15% patients had mature cystic teratoma. Dermoid cysts make up 40% of all ovarian neoplasms with a median age of presentation at 30 years.[15] Among surgically managed cases, the frequency of malignant tumors is 13% in premenopausal women and 45% in postmenopausal women.[15] Out of 31, two patients had adenocarcinoma of the ovary, one newly diagnosed and the other one was previously operated and came with recurrence. Ovarian cancer affects 1-2% of all women in the developed world. It the 4th commonest cancer in women after breast, colorectal and lung cancer.[13]It mostly affects elderly and middle aged women with highest incidence reported in north America and north Europe and lowest in Japan and developing countries. Over 80% are adenocarcinomas but germ cell tumors are the most common histological type under the age of 30. Main risk factors are genetic susceptibility, reproductive history and contraceptive use. Typically one or two children are associated with 30% reduction in risk and three or more children about 60% reduction.[14, 15] Women over the age of fifty are more likely to have malignancy and less benefit from conservative management. If cyst is echo lucent, multilocular or bilateral and CA-125 is raised, then surgical management must be advised to all postmenopausal women irrespective of the size of the cyst.

CONCLUSION

Ovarian cysts are common in reproductive age group. Most of them are benign and respond to conservative management, provided they are clear, with no signs of acute complications. In these cases, unnecessary surgery can be avoided with proper monitoring and selection of patients. Surgery is mandatory however in post- menopausal age group because of increased chances of malignancy, especially if the cyst is multilocular, bilateral or associated with raised CA-125.

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