Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 7, Issue, 05, pp.16499-16502, May, 2015

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

ISSN: 0975-833X

RESEARCH ARTICLE

COMPARISION OF CLINICAL PRESENTATION AND MORPHOLOGICAL APPEARANCE OF BENIGN, BORDERLINE AND MALIGNANT TUMORS OF OVARY-AN INSTITUTE

***Lankamalla Jhansi Rani, Prasad Uma and Prasad Usha**

QNo 49-3-3, Lalithanagar, Visakhapatnam 530016, Andhra Pradesh, India

ARTICLE INFO

Article History:
Received 20th February, 2015
Received in revised form
02nd March, 2015
Accepted 07th April, 2015
Published online 31st May, 2015

Key words:
Symptoms,
Morphology,
Ovarian tumors,
Significance

ABSTRACT

Background: Non specific symptoms in borderline and malignant tumors are a gray zone. An appropriate knowledge of these symptoms with investigations would detect the tumors at an early stage.

Aim of the study: To compare the clinical presentation, morphological appearences of various tumors of the ovary and their significance in diagnosis.

Materials and methods: It is a prospective study for a period of three years. Clinical data was recorded followed by laparotomy. The tumors were thoroughly grossed and subjected to histopathological examination. Results were tabulated and Chi square test was applied to know the significance.

Results: 158 ovarian tumors were analyzed.69.62% tumors were benign, 15.82% were borderline tumors and 14.55% tumors were malignant. Borderline and malignant tumors were common in age group beyond 40 years except for germ cell tumors which were common in younger age. Nonspecific symptoms were seen in 52% of borderline and malignant tumors. Purely cystic tumors were benign,purely solid tumors were malignant. Tumors which were partially cystic and partially solid ,histopathological examination is a must to sub categorise the lesions further.

Conclusion: Women beyond the age of 40 years presenting with non specific symptoms like nausea, vomiting, and increased urinary frequency should be subjected to ultrasonography followed by laparotomy and histopathological examination for early diagnosis and institution of therapy.

Citation: Lankamalla Jhansi Rani, 2015. "Comparision of clinical presentation and morphological appearance of benign, borderline and malignant tumors of ovary-an institute", *International Journal of Current Research*, 7, (5), 16499-16502.

INTRODUCTION

Neoplastic conditions of ovaries present as a great challenge to the gynecologist especially when they present with early disease with non specific symptoms. In India ovarian cancer comprises 8.7% of cancer in different parts of the country [1, 2].Our Institute caters the need of semiurban, rural and tribal population where majority are illilerate and usually present in the late stage of the disease.

MATERIALS AND METHODS

This is a prospective study for a period of three years from January 2012 to December 2014,who on abdominal or bimanual examination and abdominal ultrasound were found to have ovarian cyst or tumor and later underwent laparotomy were included in the study. Ovarian tumors who were managed conservatively were excluded from the study.

****Corresponding author: Lankamalla Jhansi Rani,***
QNo 49-3-3, Lalithanagar, Visakhapatnam 530016, Andhra Pradesh, India.

The various clinical symptoms, age at presentation were recorded as per proforma. All the patients were subjected to laparotomy, the morphological features including gross examination and microscopic features were recorded. Chi-square test was applied to compare the clinical features of benign, borderline and malignant tumors.

RESULTS

A total of 158 laparotomies were done for ovarian tumors during the study period. There were 110/158(69.62%) benign tumors, 25/158(15.82%) borderline tumors and 23/158 (14.55%) malignant tumors. Occurrence of ovarian tumors ≤ 40 years of age is (97/158,61.39%) and > 40 years of age is (61/158,38.60%). Ratio of benign tumors, borderline tumors and malignant tumors ≤ 40 years and > 40 years are 2.2:1,1:1.08 and 1:1.5 respectively. Malignant epithelial tumors, sex cord stromal tumors and metastatic tumors were common beyond 40 years and malignant germ cell tumors were common in the age less than 40 years. (P value .001) Table 1.

As regards to symptoms; 20 patients with benign tumors were asymptomatic, with abdominal pain being the commonest presentation (46/110,41.81%). Benign epithelial tumors usually presented as abdominal masses(20/110,18.18%) and germ cell tumors, sexcord stromal tumors presented with menstrual irregularities(18/110,16.36%). Malignant tumors presented as abdominal mass(6/23,26.08%,P value:0.005), abdominal enlargement due to ascitis (2/23,8.69%,P value:0.002), loss of weight(13/23,56.52%) and increased urinary frequency in (4/23,17.39%,P value:0.004) Table 2.

tumors serous cystadenocarcinoma was the commonest (7/23, 30.43%) Table 5.

DISCUSSION

Buys *et al*. (2005) documents that early diagnosis of ovarian cancer is a challenge to the gynecologists and the symptoms in the early stage are vague and not specific. Early diagnosis would totally alter the prognosis of ovarian cancer.

Table1. Age distribution of benign, borderline and malignant tumors-158

Tumors	Number of lesions	≤ 40 years	>40 years	P value
Benign tumors	110			
a. Benign epithelial tumors	88	58	30	>0.05
b. Germ cell tumors	19	16	3	
c. Sex cord stromal tumors	3	2	1	
Borderline tumors	25			
a. Borderline serous tumors	12	2	10	>0.05
b. Borderline mucinous tumors	13	2	11	
Malignant tumors	23			
a. Epithelial tumors	9	2	7	< 0.05 (significant)
b. Sexcord stromal tumors	4	-	4	
c. Germ cell tumors	8	8	-	
d. Metastatic tumors	2	-	2	

Table 2. Comparision of symptoms among patients with benign, borderline and malignant tumors-158

Symptoms	Benign tumors (n=110)	Borderline tumors (n=25)	Malignant tumors (n=23)	P value
1. Asymptomatic	20	-	-	0.01
2. Abdominal enlargement	-	-	2	0.002
3. Abdominal pain	46	10	-	0.008
4. Abdominal mass	20	13	6	0.005
5. Nausea ,vomiting	4	1	3	>0.05
6. Loss of weight, appetite	-	-	6	>0.05
7. Increased urinary frequency	2	1	4	0.004
8. Menstrual irregularities	18	-	2	>0.05

Table 3. Laterality of tumors-158

Tumors	Number of lesions	Unilateral	Bilateral
1.Benign tumors	110	106	4
2.Borderline tumors	25	25	-
3.Malignant tumors	23	15	8
Total	158	146	12

Table 4. Gross appearance of lesions-158

Tumors	Number of lesions	Cystic	Solid	Partly cystic partly solid
1. Benign tumors	110	90	-	20
2. Borderline tumors	25	-	-	25
3. Malignant tumors	23	1	9	13
Total	158	91	9	58

Benign tumors (106/110, 96.36%), all borderline tumors and 15/23(65.21%) of malignant tumors present as unilateral tumors Benign tumors (4/110, 3.63%) and 8/23(34.78%) of malignant tumors present as bilateral tumors Table 3. On gross examination, benign tumors (90/110, 81.81%) are cystic and 20/110(18.18%) are partly cystic and partly solid. All the borderline tumors are partly cystic and partly solid on gross examination. Malignant tumors 13/23(56.52%) are partly cystic and partly solid, 9/23(39.13%) were purely solid and one case was purely cystic on gross examination Table 4. On histopathology in benign tumors the commonest was serous cystadenoma (41/110, 37.27%), borderline tumors, mucinous tumor was the commonest (13/25, 52%) and in malignant

Several studies document that women with ovarian cancer present commonly with abdominal, gastrointestinal and constitutional symptoms. Tayyiba Wasim *et al*. (2009) studied 110 patients with ovarian disease. In their study abdominal enlargement and abdominal mass were significantly more in malignant tumors (P value: 0.003, Pvalue: 0.005). Goff *et al*. (2000) studied 1752 ovarian cancer patients with 77% had abdominal symptoms, 70% gastrointestinal (nausea, vomiting, constipation) 50% constitutional symptoms, 58% pelvic pain and 38% had urinary symptoms. In the present study abdominal enlargement, abdominal mass and increased urinary frequency was significantly more in malignant tumors (P value: 0.002, P value: 0.008 and P value: 0.004) respectively.

Table 5. Histological variants-158

Tumors	Number of lesions	Percentage
Benign tumors	110	
1. Benign epithelial tumors	88	80
i. Serous cystadenoma	41	46.59
ii. Serous cystadenofibroma	9	10.22
iii. Mucinous cystadenoma	30	34.09
iv. Benign Brenner tumor	8	9.09
2. Germ cell tumors	19	17.27
i. Benign cystic teratoma	19	
3. Sexcord stromal tumors	3	2.72
i. Fibrothecoma	3	
Borderline tumors	25	
1. Borderline serous tumors	12	48
2. Borderline mucinous tumors	13	52
Malignant tumors	23	
1. Serous cystadenocarcinoma	7	30.43
2. Mucinous cystadenocarcinoma	2	8.69
3. Transistional cell carcinoma	2	8.69
4. Granulosa cell tumor	4	17.39
5. Dysgerminoma	5	21.73
6. Mixed germ cell tumor	1	4.34
7. Krukenberg tumor	2	8.69

Sultanta *et al*. (2005) and Rafiq *et al*. (2005) reported that abdominal pain was the most commonest presentation in both benign and malignant subgroups, but was not stastically significant. In the present study 41.81% of benign tumors and 40% of borderline tumors presented with abdominal pain. None of the malignant tumors presented with abdominal pain. Abdominal mass was seen in 18.18% of benign tumors, 52% of borderline tumors and 26% of malignant tumors. Non specific symptoms like nausea, vomiting, increased frequency of urine was seen in 5.45% of benign tumors,8% of borderline tumors and 30.43% of malignant tumors ,which needs introduction of screening methods in these cases. In the study by Tayyiba Wasim *et al*. (2009) mean age for benign tumors was 36.95±8.2 years with 80% of malignant tumors in older age group >50 years. Late presentation of the disease was seen in 70% of cases. Similar results have been documented in study by Lataifeh *et al*. (2005) and Boyle *et al*. (2004). In the present study the ratio of benign tumors, borderline tumors and malignant tumors ≤ 40 years and > 40 years were 2.2:1, 1:1.08 and 1:1.5 respectively. Serous borderline ovarian tumors comprised 65% of all borderline ovarian tumors, mean age of presentation being 34-40 years and mucinous border line tumors constitute 32% of all borderline ovarian tumors with mean age of 45 years (Jones, 2006). In the present study 48% were borderline serous tumor and 52% borderline serous tumors, 84% of tumors presenting beyond 40 years of age. In the study by Tayyiba Wasim *et al*. (2009) 72% were benign tumors with surface epithelial tumors being the commonest. Ahmed *et al*. (2004) documented in their study similar features. In the present study 69.62 % of cases were benign with surface epithelial tumors being 80% of the tumors.

Conclusion

In the present study 84% borderline tumors and 56.52% of malignant tumors presented beyond 40 years of age .Non specific symptoms like nausea, vomiting, increased urinary frequency, loss of weight, abdominal pain was seen in 52% of borderline and malignant tumors. Specific symptoms like abdominal mass and ascitis was seen in 43.75% of borderline and malignant tumors indicating that lesions presented in late stage of the disease.

It is important to recognise the symptoms, carry out a bimanual examination and ultrasonography to diagnose the disease at early stage especially at the age of 40 years and beyond. Purely cystic tumors were benign tumors and purely solid tumors were malignant tumors, the gray zone is partly cystic and partly solid tumors. Histopathology is the mainstay of diagnosis and helps in subcategorizing these tumors especially partly cystic and partly solid tumors.

REFERENCES

Ahmad, M., Masood, T., Afzal, S. and Mubarik, A. 2004. Clinicopathological study of 762 ovarian neoplasms at Army medical college Rawalpindi. *Pak. J. Pathol*, 15:147-52.

Basu, P., De, P., Mandal, S., Ray, K. and Biswas, J. 2009. Study of patterns of …..of ovarian cancer patients in a specialised cancer Institute in Kolkatta, Eastern India. *Indian J. Cancer,* 46(1):28-33.

Boyle, P. and Ferlay, J. 2004. Cancer incidence and mortality in Europe. Ann Oncol 2005; 16: 481-8.

Buys, S.S., Partridge, E., Greene, M.H., Prorok, P.C., Reding, D. and Riley, T.L. *et al*. 2005. Ovarian cancer screeing in the Prostate, Lung, Colorectal and Ovarian (PLCO) cancer screening trial: findings from the initial screen of a randomized trial. *Am. J. Obstet Gynecol,* 193:1630-9.

Goff, B.A., Mandel, L., Muntz, H.G. and Melancon, C.H. 2000. Ovarian carcinoma diagnosis.Cancer, 89:2068-75.

Gupta, N., Bisht, D., Agarwal, A.K. and Sharma, V.K. 2007. Retrospective and prospective study of ovarian tumors and tumor like lesions. *Indian J. pathol Microbiol,* 50(3):525-27.

Jones, M.B. 2006. Borderline Ovarian tumors: Current Concepts for prognostic factors and clinical management. *Cln Obstet Gynecol*, 49:517-525

Lataifeh, I., Marsden, D.E., Robertson, G., Gebski, V., Hacker, N.F. 2005. Presenting symptoms of epithelial ovarian cancer. *Aust. N Z J. Obstet Gynaecol,* 45: 211-4.

Rafiq, B., Kokab, H. and Rao, S.I. 2005. Ovarian Tumors. *Professional Med. J.,* 12:397-403.

Sultanta, A., Hasan, S. and Siddiqui, Q.A. 2005. Ovarian tumors: A five years retrospectivestudy at Abbasi Shaheed Hospital, Karachi. *Pak. J. Surg.,* 21: 37-40.

Tayyiba Wasim, Ashraf Majrroh, Saqib Siddiq. 2009. Comparison of clinical presentation of Benign and Malignant Ovarian Tumours. *J. Pak. Med. Assoc,* 59(1).

****