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Demographic and Clinicopathological Profile of Women with Ovarian Tumours at A Tertiary Care Centre.

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Abstract

Introduction: Ovarian tumours had a wide spectrum of clinical, morphological and histological pattern which affects their management. Ovarian tumour can occur at any age in a woman's life and differ in type according to age. The present study was done to assess the demographic profile of the patients, clinical presentation and histopathology of the ovarian tumours.

Material and methods: His was a prospective observational study done in the Department of Obstetrics and Gynaecology, S.M.S. Medical College, Jaipur. 150 patients presented with ovarian tumours were included in the study after obtaining written informed consent. Data regarding demographic profile, clinical presentation, histopathology were recorded in the Microsoft excel sheet and analyzed.

Results: Malignant ovarian tumours were found in 21.3% patients. Mean age of the patient with malignant ovarian tumours (45.09±14.33) was significantly more than with benign ovarian tumours (33.07±12.59). 40.6% patients with malignant tumours were postmenopausal in contrast to 18.6% patients with benign tumours. Pain abdomen was the commonest presenting symptoms irrespective to the nature of the tumour. 78.1% patients with malignant tumours had serum levels of CA 125 levels >35 U/ml in contrast to 11.1% with benign tumours. On

histopathology, commonest benign tumour was serous cystadenoma (39.3%) and malignant tumour was papillary serous cystadenocarcinoma (13.6%).

Conclusion: Majority of the ovarian tumours in our study was benign still 21.3% tumours were malignant. They had nonspecific symptom and different histopathological spectrum so early diagnosis and preoperative discrimination between benign and malignant tumour will help in effective planning of the treatment and reducing the morbidity and mortality.

Keywords: Ovarian tumours, Benign, Malignant, demographic profile.

Introduction

Ovarian cancer is the third leading malignancy affecting Indian women after cancer breast and cancer cervix. In India, during the period 2004-2005, proportion of ovarian cancer varied from 1.7% to 8.7% of all female cancers in various urban and rural population based registries operating under the net- work of the National Cancer Registry programme (NCRP) of Indian Council Medical Research.[1] The overall 5 year survival rate is approximately 45% due to late stage at diagnosis of the disese.[2] More than 60% of women presenting with ovarian cancer have Stage III or IV with 5-year relative survival of just 27%[3] Only 15% of women present when the malignancy is still localized, with a 5-year relative survival of 92%.[3]

Ovarian tumours usually presents with a variety of nonspecific symptoms like pain abdomen, bloating, abdominal lump, abnormal uterine bleeding and urinary symptoms. As a result, diagnosis of ovarian tumour at an early stage is a great challenge to the Gynaecologists.

Ovarian tumours had a wide spectrum of morphological and histological pattern which affects their management. Preoperative diagnostic procedures that are able to distinguish whether an ovarian neoplasm is malignant or benign could be useful in planning optimized treatment. Till dates very few studies have been done in the state of Rajasthan to determine the demographic and Clinicopathological spectrum of the ovarian tumour. So the present study was done to assess the demographic profile of the patients, clinical presentation and histopathology of the ovarian tumours.

Material and methods

This was a prospective observational study done in the Department of Obstetrics and Gynaecology, S.M.S. Medical College, Jaipur, between January 2018 to December 2018. 150 patients presented with ovarian tumours were included in the study after obtaining written informed consent. Data regarding demographic profile, clinical presentation, histopathology were recorded in the Microsoft excel sheet and analyzed.

Results

Out of 150 patients with ovarian tumours, 21.3% had malignant tumours. Demographic profile of the patients is shown in table 1. 84.4% patients with malignant ovarian tumours were above 30 years of age as compared to 49.2% patients with benign tumours. Mean age of the patient with malignant ovarian tumours (45.09±14.33) was significantly more than with benign ovarian tumours (33.07±12.59)(p -.0003). 59.4% patients with malignant ovarian tumours had 3 or more children in contrast to 30.5% patients with benign tumours. (p-.002). There was no significant difference between benign and malignant tumours on the basis of residence, literacy and socio-economic status. 40.6% patients with malignant tumours were postmenopausal in contrast to 18.6% patients with benign tumours. 81.4% patients with benign tumours were premenopausal as compared to 59.4% with malignant tumours. The difference between patients with benign and

malignant tumours on the menopausal status was statistically significant. (p- 0.009)(Table 2)

Main presenting symptoms in patients with benign tumours was pain abdomen (55.9%) followed by discharge per vaginum (20.4%) and menstrual irregularity (14.4%). Lump abdomen was present in only 6.8% patients while the main presenting symptom in patients with malignant tumours was pain abdomen (56.3%) followed by lump abdomen (21.9%) and menstrual irregularity (15.6%). Discharge per vaginum was present in 3.1% patients.(Table 3)

Serum levels of CA 125 is shown in table 4. A cut-off value of 35U/ml of serum CA 125 is used to differentiate benign ovarian tumours from malignant tumours. 88.9% patients with benign ovarian tumours had serum levels of CA 125 <35 U/ml in contrast to 21.9% patients with malignant ovarian tumours. 78.1% patients with malignant tumours had serum levels of CA 125 levels >35 U/ml in contrast to 11.1% with benign tumours. There was significant difference in mean serum levels of CA 125 in patients with benign tumours (18.64±13.52) and malignant tumours (75.98±50.67) (p-<.00001).

Size of ovarian tumours measured by USG is shown in table 5. 62.5% patients with malignant tumours had ovarian tumours of more than 7 cm as compared to 44.1% patients with benign tumours (<.006). Mean size of the benign ovarian tumour (7.23±1.95 cm) was significantly lower than 8.55±2.54 cm of malignant tumours. (p-<.006)

Discussion

Out of 150 patients with ovarian tumours, 21.3% were malignant. Our results were similar to that observed by Agrawal et 2015[4](20.6%) and higher than 12.6% reported by Tahereh Ashrafgangooei et al 2011[5]. The prevalence of malignancy in our study was lower than those reported in previous studies by Ulusoy et al 2007[6] and Watcharda Moolthiya et al 2009.[7] In our study benign tumours were more (78.7%) than malignant tumours (21.3%) similar to Pilli et al[8], Gupta et al[9] and Agrawal et al 2015.[4]

84.4% patients with malignant tumours were above 30 years of age in contrast to 49.2% patients with benign tumours. Mean age of the patients with malignant tumours (45.09±14.33) was significantly more than mean age of the patients with benign tumours (33.07±12.59). Our results were similar to that observed by Wasim et al2009[10], Mondal et al 2011[11], Tahereh Ashrafgangooei et al 2011[5]and Radhamani and Akhila 2017.[12] On univariate analysis there was statistically significant difference in patients with benign and malignant tumours on the basis of parity. Odukogbe et al 2004[13] reported that 47.6% ovarian tumours were among grand multiparas while Saeed et al 1999[14] found no correlation with parity in malignant ovarian tumours. No difference was observed on the basis of residence, literacy status and socio-economic status of the patient with benign or malignant tumours.

40.6% patients with malignant tumours in our study were postmenopausal in contrast to 18.6% patients with benign tumours. Benign tumours were more common in premenopausal patients. Our results were similar to that observed by Radhamani and Akhila 2017[12] who in their study observed that majority of the tumours belonged to postmenopausal group, Dora et al[15] who observed that among the postmenopausal patients, 81.6% had malignant disease as compared to premenopausal women and Veluswamy Arun-Muthuvel 2014[16] who observed that 61% of the ovarian tumours in postmenopausal women were malignant. The main presenting symptom in our study irrespective of the nature of the tumour was pain abdomen followed by lump abdomen in patients with malignant tumours and discharge per vaginum in patients

with benign tumours. Our results were similar to that observed by Prasad et al 2017[17] and Agrawal et al 2015[4] while Pilli et al 2002[8] in their study observed lump abdomen to be the commonest presenting symptoms. Serum CA 125 levela at a cut-off 35 U/ml was used to discriminate between benign and malignant tumours. The mean level of serum CA 125 levels was significantly higher in malignant tumours than benign tumours. Our results were in accordance with Y Yamamoto et al 2015[18] and Dora et al 2017[15]

On USG, mean size of the malignant ovarian tumour (8.55±2.54) was significantly more than benign tumours (7.23±1.95). Most of the benign and malignant tumours were unilateral still 28.1% malignant tumours were bilateral as compared to 15.3% benign tumours. Our results were similar to Pilli et al[8] and Agrawal et al 2015.[4]

On histopathology, commonest benign tumour was serous cystadenoma (39.3%) followed by mature teratoma (19.3%) and mucinous cystadenoma (12.3%) similar to that observed by GG Swamy et al 2010.[19] Serous cystadenoma was the commonest benign tumour in the study done by Jung-Woo Park et al 2012[20] and Veluswammy Arun Muthuvel et al 2014[16] while the commonest benign tumour in ABF Mohammad et al 2014[21] study was dermoid cyst (21.5%) followed by mucinous cystadenoma (13.4%) and serous cystadenoma (10.5%). Commonest malignant tumour on histopathology was papillary serous cystadenocarcinoma (13.6%) followed by mucinous adenocarcinoma (6%) and serous cystadenocarcinoma (3.3%) while serous cyst adenocarcinoma was the commonest malignant tumour in the study of ABF Mohammad et al 2014[21].and Veluswammy Arun Muthuvel et al 2014[16]. In our study majority of the ovarian tumours were benign still 21.3% tumours were malignant. Pain abdomen was the commonest presenting symptoms. Mean age of the patient with malignant tumours was 45.09±14.33 years and that of benign tumours was 33.07±12.59 years. Malignant tumours were more common in postmenopausal women.The commonest benign tumour was serous cystadenoma and malignant tumour was papillary cystadenocarcinoma. Early diagnosis and preoperative discrimination between benign and malignant tumour will help in effective planning of the treatment and reducing the morbidity and mortality.

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Legends Tables

Table 1: Demographic Profile of the patients

Variables	Benign		Malignant		p value
	No	%	No	%	
Age (years)					.0003
<30	60	50.8	5	15.6	
>30	58	49.2	27	84.4	
Mean age	33.07±12.59		45.09±14.33		
Parity					.002
0 – 2	82	69.5	13	40.6	
≥3	36	30.5	19	59.4	
Residence					.4
Urban	86	72.9	21	65.6	
Rural	32	27.1	11	34.4	
Literacy					.7
Literate	99	83.9	26	81.3	
Illiterate	19	16.1	6	18.7	
Socio-economic Status					.7
Lower	58	49.2	16	50	
Lower middle	53	44.9	13	40.6	
Upper Middle	7	5.9	3	9.4	

Table 2: Menopausal Status

Menopausal Status	Benign		Malignant		p value
	No	%	No	%	
Premenopausal	96	81.4	19	59.4	.009
Postmenopausal	22	18.6	13	40.6	

Table 3: Presenting symptoms

Symptoms	Benign		Malignant	
	No	%	No	%
Pain abdomen	66	55.9	18	56.3
Lump abdomen	8	6.8	7	21.9
Menstrual irregularity	17	14.4	5	15.6
Discharge Pervaginum	24	20.4	1	3.1
Post menopausal bleeding	3	2.5	1	3.1

Table 4: Serum CA 125 Levels

Serum CA 125	Benign		Malignant		p value
	No	%	No	%	
<35	105	88.9	7	21.9	<.00001
>35	13	11.1	25	78.1	
Mean ±SD	18.64±13.52		75.98±50.67		

Table 5: USG findings

	Benign		Malignant		p value
	No	%	No	%	
Bilaterality	18	15.3	9	28.1	
Mean size ±SD	7.23±1.95		8.55±2.54		<.006

Table 6: Histopathological Diagnosis of Ovarian tumours

Histopathological diagnosis	N	Percentage %
Serous cyst adenoma	59	39.3
Mucinous cyst adenoma	26	12.3
Mature teratoma	29	19.3
Simple serous cyst	3	2
Fibroma ovary	1	0.7
Papillary serous cyst adenocarcinoma	16	13.6
Mucinous adenocarcinoma	9	6
Serous cyst adenocarcinoma	5	3.3
Embryonal carcinoma	1	0.7
Granulosa cell tumour	1	0.7
Total	150	100%