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Different types of tumors in perimenopausal women presenting with ovarian masses at a Tertiary Care Hospital.

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ABSTRACT… Objectives: To determine frequency of benign and malignant tumors among perimenopausal women presenting with ovarian masses at a tertiary care Hospital. **Study Design:** Descriptive Cross Sectional study. **Setting:** Department of Obstetrics & Gynecology, Jinnah Hospital, Lahore. **Period:** Six Months from August 2017 to January 2018. **Material & Methods:** A total 127 premenopausal females with ovarian masses visiting Obstetrics & Gynaecology Department, Jinnah Hospital, Lahore were selected. After detailed medical history and clinical examination patients underwent ultrasonography to diagnose status of ovarian masses. Data was entered in self-made proforma. **Results:** Total 127 patients were selected**.** Mean age of cases was 48.87 ± 3.04 years, with mean BMI of 26.52±2.43 kg/m^2 and obese patients were 30.7%. Out of all 73.2% patients had benign masses and 26.8% patients had malignant masses. Obesity and family history were significantly correlated with malignant tumors among premenopausal women having ovarian masses p-value 0.001. **Conclusion:** It was observed that the malignant tumors are frequently linked to pre-menopausal women with ovarian masses. Obese and family history positive patients are on high risk of malignant tumors.

Key words: Malignancy, Ovarian Masses, Ultrasonography.

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INTRODUCTION

Around 10% of females undergo certain form of surgical procedures in lifetime for ovarian mass and discrimination of such ovarian lesion has significant value in our gynecological practices.[1] Most ovarian cysts and masses are benign in premenopausal females.[2] The average occurrence of ovarian cyst showing symptoms among malignant premenopausal female is about 1 in 1000 cases, rising to 3 in 1000 cases at 50 years of age.[3] In premenopausal female, preoperative discrimination between the malignant and the benign ovarian mass may be troublesome with no examination or procedure being explicitly higher regarding accuracy exceptional cases is tumors with germ cells including unique cancer marker elevations including human chorionic gonadotrophin (hCG) and alphafetoprotein (α-FP). Two significant issues require answers: prejudice against malignant and benign adnexal masses as well as, if possible, selecting the correct surgical intervention. It has become well defined that the benchmark for diagnosis of ovarian cyst is ultrasonography.[1,4] Classifying ovarian masses allows malignant subjects to be treated accordingly by gynecological oncologists who have been seen to standardize care and enhance survivability for therapy.[5] In addition, proper classification of benign masses encourages the selection of ovarian disease cases who may not need treatment or are appropriate for minimal surgical procedure in case of intervention needed. Nonetheless, determining if a mass is malignant or benign is not an only clinically data, we have to learn when assessing which medication is necessary. It is becoming particularly important to understand the basic histology of the mass as treatment strategies are more personalized to a particular patient.[5] Forecasting a mucinous marginal growth, for example, offers a potential for fertility-sparing treatment and will demonstrate the necessity of more gastrointestinal examination.

With benign cancer, it is necessary to determine the existence of an endometrioma as well as the likelihood of actively infiltrating endometriosis while determining who must operate and the degree of surgery. The retrospective assessment of the vascular and morphological properties of a mass via ultrasonography by an investigator is highly useful in determining if a mass is malignant or benign.[5] Several masses as well have characteristics that make it possible to make a reliable medical assessment of a specific pathology of a particular mass 5. Ultrasonography may provide diagnostics for the assessment of ovarian masses as a major imaging paradigm. With even strong confidence, Doppler Ultrasonography can cause ovarian masses to remain diagnosed as malignant or benign. Different methods have been practiced to classify ovarian masses, such as simple scoring schemes, pattern recognition strategy, logistic regression-based probability predictors, statistics based scoring systems, and complex mathematical prototypes like neural networks. These all reveal that the pattern recognition strategy encompasses easy understanding with greater accuracy contrasted to other techniques for forecasting malignancy.[6] Saluja et al[7] from India reported benign masses on clinical assessment to be 75 and malignancy in 25 % while on ultrasound 70 % benign and 30 %[7] were malignant.

This proposed study has been planned to be conducted in perimenopausal women to determine pattern of ovarian masses in as there is no such study done in our population. Most of the studies conducted on this topic have been done in postmenopausal women and there is scarcity of data in this group, so the findings of my study will generate baseline database of our population which is helpful to design future advanced studies on this topic.

MATERIAL & METHODS

This study was conducted Department of Obstetrics & Gynecology, Jinnah Hospital, Lahore. It was a Descriptive cross – sectional study from Six months from August to January (2017-2018).

Sample size is 127 at confidence interval of 95 %, using p=30 % (frequency of malignancy in ovarian masses)[7] and margin of error = 8 %

Inclusion Criteria

a. Perimenopausal women with ovarian masses (irrespective of disease duration), as defined in operational definitions.
b. Age range 45 - 55 years.

Exclusion Criteria:

a. Patients with recurrent ovarian masses.
b. Patients unwilling to contribute to current study.

A written consensus was received from every patient and they were briefed about objective and the procedure of the study, making them sure of provided information confidentiality and that the subjects who partake it current study will undergo no any risk. Detailed medical history, clinical examination and rutien laboratory investigations were carried out. Patients underwent ultrasonography to diagnose status of ovarian masses (benign/malignant). Benign tumors were defined as unilateral, without ascites, unilocular, smooth and cystic masses on ultrasound.[8] Malignat tumors were defined as bilateral, with ascites, solid nodular and irregular, and multiocular on ultrasound.[8] The data entry as analysis was carried out by the researcher through premeditated proforma and SPSS 20.0, respectively. The quantitative variables including BMI and age were offered as mean & standard deviation. Frequencies and percentages were calculated for age groups, pattern of ovarian masses (benign/malignant), family history, residential status, socioeconomic status and obesity. Effect modifiers including parity, age, family history and obesity were controlled thru post-stratification and stratification chi-square test to know their effects on outcomes. P-value ≤ 0.05 was deemed significant.

RESULTS

This study comprised of a total of 127 patients with 48.87 ± 3.04 years of mean age of (least 45 years and extreme 54 years). Majority of cases i.e. 83 (65.4 %) were aged below 50 years. Mean

parity was 3.15 ± 1.25 while 69 (54.3%) had parity up to 3. Mean BMI was found to be 26.52 ± 2.43 kg/m^2 and obese patients were 39 (30.7 %), while family history was positive in 10 (7.9%) patients. (Table-I)

According to ultrasonography findings, benign masses were seen in most of the patients as 93 (73.2%) while malignant masses were noted in 34 (26.8%) patients. (Table-II)

There was no significant association of age and parity with malignant tumors, while obesity and family history were significantly correlated with malignant tumors among premenopausal women having ovarian masses p-value 0.001. (Table-III)

Variables	Frequency	Percentage
Age Groups		
45 – 50 Years	83	65.4
51 – 55 Years	44	34.6
Total	127	100
Residential Status		
Rural	43	33.9
Urban	84	66.1
Total	127	100
Parity		
Up to 3	69	54.3
More than 3	58	45.7
Total	127	100
Obesity		
Yes	39	30.7
No	87	69.3
Total	127	100
Family History		
Yes	10	7.9
No	117	92.1
Total	127	100

Table-I. Demographic characteristics of patients (n = 127)

Ovarian Masses	Frequency	Percentage
Benign	93	73.2
Malignant	34	26.8
Total	127	100

Table-II. Pattern of ovarian masses among study cases (n = 127)

Variables		Ovarian Masses		P-Value
		Benign	Malignant	
Age Groups	Up to 50 Years	64	19	0.208
	More than 50 Years	29	15	
	Total	93	34	
Parity	Up to 3	50	19	0.844
	More than 3	43	15	
	Total	93	34	
Obesity	Yes	15	24	0.001
	No	78	10	
	Total	93	34	
Family History	Yes	00	10	0.001
	No	93	24	
	Total	93	34	

Table-III. Stratification of ovarian masses with regards to age, parity, obesity and family history (n = 127)

DISCUSSION

Ovarian masses are quite prevalent and 10 percent of females have an ovarian mass-associated surgical procedure for its investigation throughout their lifetime. In current study patients revealed a mean age of 48.87 ± 3.04 years, where most cases 83 (65.4 %) were below 50 years of age. Farooq et al[9] documented a mean age of 48.63 ± 3.61 years that support the findings of current study. Similarly Ehsan et al[10] supported current study by revealing a mean age of 47.3 ± 3.8 year.

In this study out of all 127 cases, 43 (33.9 %) were from rural regions and 84 (66.1 %) were urban residents, additionally 44 (34.6%) were from poor socioeconomic status and 83 (65.4%) belonged to middle income families. Saluja et al from India[7] reported similar findings which are consistent to our study results.

In this study mean parity was 3.15 ± 1.25 while 69 (54.3%) had parity up to 3. Mean BMI in current study was 26.52 ± 2.43 kg/m^2 with obesity presenting among 39 (30.7 %) cases, whereas family history was found positive among 10 (7.9%) cases. Similar results were reported by Sharadha et al[11] from India.

In this study of these 127 study cases, ultrasonography findings revealed benign masses in 93 (73.2 %) while malignant masses were noted in 34 (26.8%). Ashraf et al[12] reported 65 % benign masses while 35 % malignant masses which supported current study outcomes. Saluja et al from India [7] reported benign masses on clinical assessment to be 75 and malignancy in 25 % while on ultrasound 70 % benign and 30 %[7] were malignant. These findings of Saluja et al [7] also favored our findings. Parmer et al[13] also reported 25.33 % malignancy which as well backed current study findings. A study conducted by Ehsan et al[10] reported 5.9 % malignancy which is quite less than that being reported in our study.

CONCLUSION

It was concluded that the malignant tumors are frequently linked to perimenopausal women with ovarian masses. Obese and family history positive patients are on high risk of malignant tumors. Ultrasonography found to be quite efficient and reliable in diagnosis of ovarian masses. Early diagnosis and management can decrease the burden of this malignancy.

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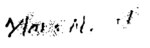
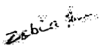
AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author(s) Full Name	Contribution to the paper	Author(s) Signature
1	Maria Akmal	Data collection, and manuscript writing.	
2	Mahham Janjua	Manuscript review.	
3	Rabia Wajid	Contribution literature review and data analysis.	
4	Maria Imran	COntribution in manuscript writing.	
5	Zobia Jawad	Review of literature and analysis.