OPEN ACCESS
Scholars International Journal of Obstetrics and Gynecology
Abbreviated Key Title: Sch Int J Obstet Gynec
ISSN 2616-8235 (Print) |ISSN 2617-3492 (Online)
Scholars Middle East Publishers, Dubai, United Arab Emirates
Journal homepage: https://saudijournals.com

Original Research Article

The Menopausal Status Score and Laboratory Profile in All Cases of Ovarian Tumor

Natia Rahnuma[1*], Dipu Das[1], Rukshana Khan[1]

[1]Assistant Professor, Obstetrics and Gynaecology, Jalalabad Ragib Rabeya Medical College, Sylhet, Bangladesh

DOI: 10.36348/sijog.2022.v05i03.002 | **Received:** 29.01.2022 | **Accepted:** 03.03.2022 | **Published:** 10.03.2022

***Corresponding author:** Natia Rahnuma
Assistant Professor, Obstetrics and Gynaecology, Jalalabad Ragib Rabeya Medical College, Sylhet, Bangladesh

Abstract

Background: Growing cases of ovarian tumor recently documented in worldwide and developing countries like Bangladesh. ***Objective:*** In this study our main goal is to evaluate menopausal status score and laboratory profile in all cases of Ovarian Tumor. ***Method:*** This cross sectional study was carried out at Department of Obstetrics and Gynaecology, Jalalabad Ragib Rabeya Medical College, Sylhet from January 2019 to December 2019 where a total of 60 women who diagnosed with ovarian tumor were included as a sample size. ***Results:*** During the study, mean age was 41.4 (SD±14.7) years and 42 (70.0%) cases were premenopausal and 18 (30.0%) cases were post-menopausal. In addition, of the benign ovarian tumours 29 (76.3%) cases had ultrasonogram score 1 and 9 (23.7%) cases had ultrasonogram score 3; while of the malignant ovarian tumours 3 (13.6%) cases had ultrasonogram score 1 and 19 (66.4%) cases had ultrasonogram score 3. Besides that, Of the benign ovarian tumours 8 (21.1%) cases had serum CA-125 level ≥35U/ml and 30 (78.9%) cases had serum CA-125 level <35U/ml; while of the malignant ovarian tumours 20 (90.9%) cases had serum CA-125 level ≥35U/ml and 2 (9.1%) cases had serum CA-125 level <35U/ml. Besides that, most common benign tumour was mucinous cystadenoma (26.7%) whereas in malignant tumors case seruos cystadenocarcinoma (23.3.0%) were seen commonly. ***Conclusion:*** According to our study we can conclude that, premenopausal women were more prone to develop ovarian tumor. Where in benign tumors cases majority were mucinous cystadenoma whereas in malignant tumor cases,serous cystadenocarcinoma was seen commonly. Also, most of the benign tumor had ultrasonogram score 1 where as in malignant cases opposite scenario was seen.

Keywords: Menopausal status score, Ovarian Tumor, Malignant tumor.

INTRODUCTION

Patients with pelvic tumour are the most common referred patients to gynaecologists. Ovarian cancer is one of the pelvic tumours, the second most common gynaecologic malignancy, the fifth cause of death due to cancers, and has more mortality than the other gynaecologic malignancies especially in the middle aged women [1-3]. Ovarian cancer is the leading cause of death from gynaecologic cancers, with 21,550 estimated new cases and 14,600 estimated deaths in the United States in 2009 [4].

In ovarian tumor cases, it is a slow-growing abnormal mass of tissue on or in a woman's ovary. A tumor is a solid mass, unlike a fluid-filled ovarian cyst. Tumors, which occur in many areas of the body, are abnormal growths that don't have any purpose. A tumor can be benign or cancerous (malignant), but ovarian tumors are typically benign [5].

Benign ovarian tumors most commonly occur in women of childbearing age. They occur in about 50 percent of women with irregular menstruation and in about 30 percent of women with regular menstruation. The causes of benign ovarian tumors are not well understood [6]. However, in this study our main goal is to evaluate menopausal status score and laboratory profile in all cases of Ovarian Tumor.

Objective

- To evaluate menopausal status score and laboratory profile in all cases of Ovarian Tumor.

METHODOLOGY

Study design: This was a cross-sectional observational study.

Place of study: This study was conducted in the Department of Obstetrics and Gynaecology, Jalalabad Ragib Rabeya Medical College, Sylhet.

Study period: This study was conducted during the period from January 2019 to December 2019.

Study population: The study population were consisted of 60 women who got admitted in the Department of Obstetrics and Gynaecology, Jalalabad Ragib Rabeya Medical College, Sylhet with diagnosed ovarian tumour, detected clinically or by ultrasound and fulfilling the inclusion and exclusion criteria.

Sampling method: Purposive sampling was employed as sampling technique in this study.

Inclusion Criteria

- Women of all age who were admitted in the Department of Obstetrics and Gynaecology, Jalalabad Ragib Rabeya Medical College, Sylhet for management of ovarian tumour.

Exclusion Criteria

- Patients suffering from
- Pelvic inflammatory disease and
- Intrauterine and ectopic pregnancy.
- Patients not underwent laparotomy.
- Patients underwent re-laparotomy following previous treatment for malignant ovarian tumour.
- Patients who are not interested to enroll in this study.

Data collection tool: Pre-designed structured questionnaire.

Procedures of collecting data

Sixty patients with ovarian tumour those who were admitted in different units of Department of Obstetrics and Gynaecology, Jalalabad Ragib Rabeya Medical College, Sylhet, and fulfilled the inclusion criteria were enrolled as study population in this study**.**

The procedure was explained to the patients. An informed and written consent was taken from those who agreed to participate in the study.

Detailed history was taken as per the pre-tested questionnaire.

General physical and systemic examination and investigations including the necessary preoperative investigations were carried out.

Procedure of data analysis and interpretation:

Data were processed manually and analyzed with the help of SPSS (Statistical package for social sciences) Version 21.0.

Quantitative data were expressed as mean and standard deviation; and comparison were done by "Z" test.

Qualitative were expressed as frequency and percentage and comparison was carried by Chi-square (χ^2) Test.

A probability value (p) of less than 0.05 was considerate to indicate statistical significance.

RESULTS

The age of patients ranged from 15 to 70 years with the mean age of 41.4 (SD±14.7) years. Considering the decade as a group, the maximum number 16 (26.7%) cases belonged to the age group 21 to 30 years. The following figure is given below in detail:

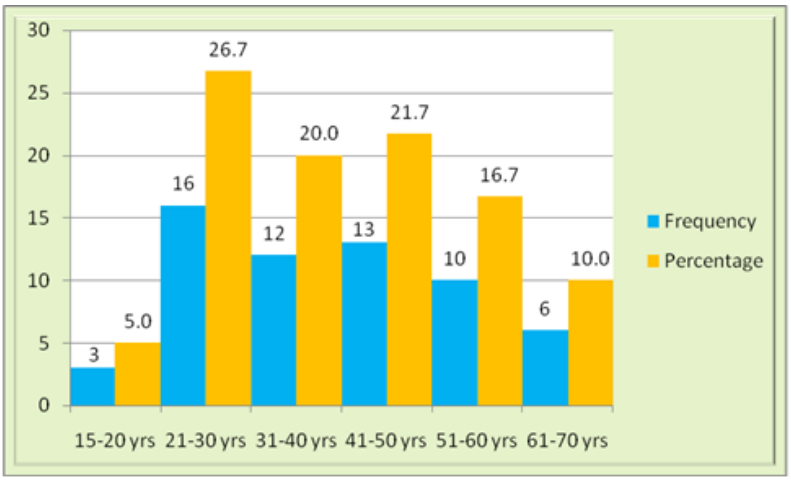

Figure-1: Distribution of the age of patients (n=60)

In Figure-2 shows distribution of patients by ultrasonogram score where ultrasonogram score 1 was in 32 (53.3%) cases and ultrasonogram score 3 was in 28 (46.7%) cases. The following figure is given below in detail:

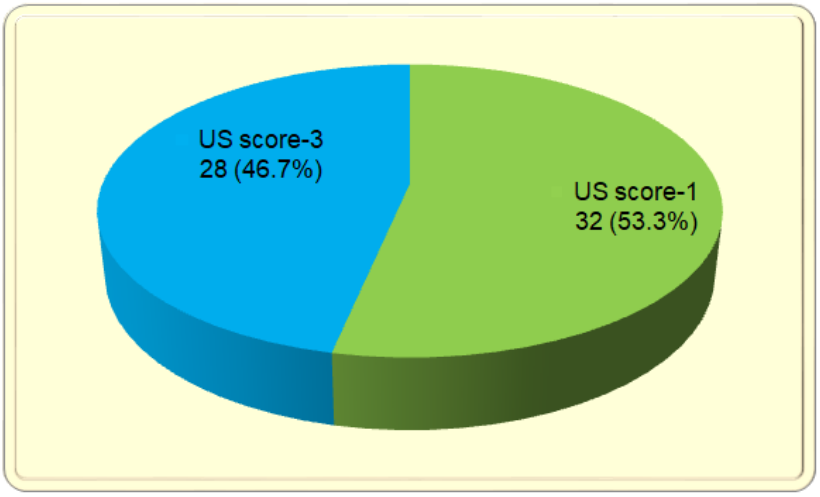

Figure-2: Distribution of patients by ultrasonogram score (n=60)

In Figure-3 shows distribution of patients by menopausal status where among the 60 cases of ovarian tumours, 42 (70.0%) cases were premenopausal and 18 (30.0%) cases were post-menopausal. The following figure is given below in detail:

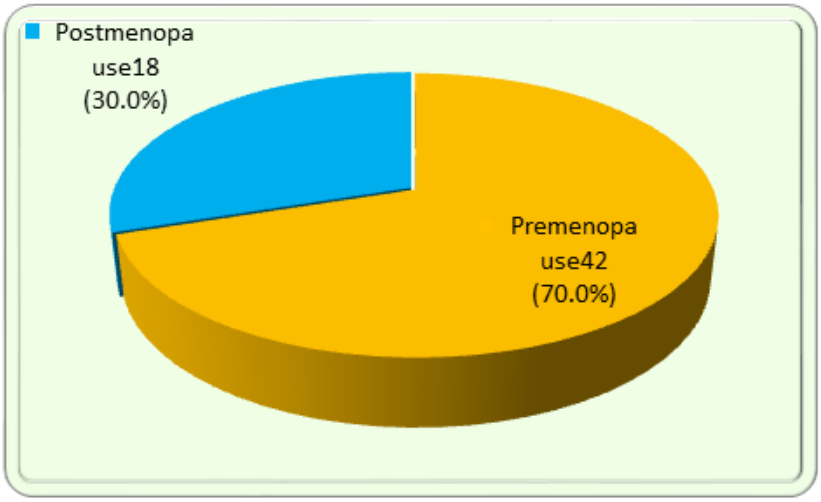

Figure-3: Distribution of patients by menopausal status (n=60)

In Table-1 shows comparison of menopausal status and histopathological nature of ovarian tumour where of the 60 cases of ovarian tumours, 42 (70.0%) cases were premenopausal and 18 (30.0%) cases were post-menopausal. Of the benign ovarian tumours 33 (86.8%) cases were premenopausal and 5 (13.2%) cases were post menopausal; while of the malignant ovarian tumours 9 (40.9%) cases were premenopausal and 13 (59.1%) cases were postmenopausal. The following table is given below in detail:

Table-1: Comparison of menopausal status and histopathological nature of ovarian tumour

menopausal status	Histopathological nature of ovarian tumours		Total
	Malignant	Benign	
Premenopausal	9 (40.9)	33 (86.8)	42 (70.0)
Post-menopausal	13 (59.1)	5 (13.2)	18 (30.0)
Total	22 (100.0)	38 (100.0)	

In Table-2 shows comparison of ultrasonogram score and histopathological nature of ovarian tumours where Ultrasonogram score-1 was in 32 (53.3%) cases and ultrasonogram score-3 was in 28 (46.7%) cases. Of the benign ovarian tumours 29 (76.3%) cases had ultrasonogram score 1 and 9 (23.7%) cases had ultrasonogram score 3; while of the malignant ovarian tumours 3 (13.6%) cases had ultrasonogram score 1 and 19 (66.4%) cases had ultrasonogram score 3. The following table is given below in detail:

Table-2: Comparison of ultrasonogram score and histopathological nature of ovarian tumours

Ultrasonogram score	Histopathological nature of ovarian tumours		Total
	Malignant	Benign	
Score 1	3 (13.6%)	29 (76.3%)	32 (53.3)
Score 3	19 (66.4)	9 (23.7)	28 (46.7)
Total	22 (100.0)	38 (100.0)	

In Table-3 shows distribution of patients by serum CA-125 level where serum CA-125 ≥35U/ml was in 28 (46.7%) cases and <35U/ml in 32 (53.3%) cases. Of the benign ovarian tumours 8 (21.1%) cases had serum CA-125 level ≥35U/ml and 30 (78.9%) cases had serum CA-125 level <35U/ml; while of the malignant ovarian tumours 20 (90.9%) cases had serum CA-125 level ≥35U/ml and 2 (9.1%) cases had serum CA-125 level <35U/ml. The following table is given below in detail:

Table-3: Distribution of patients by serum CA-125 level

Serum CA-125 level	Histopathological nature of ovarian tumours		Total
	Malignant	Benign	
≥35 U/ml	20 (90.9)	8 (21.1)	28 (46.7)
<35 U/ml	2 (9.1.)	30 (78.9)	32 (53.3)
Total	22 (100.0)	38 (100.0)	

In Table-4 shows histopathological diagnosis of ovarian tumors. Among the all biopsy specimens of 60 cases, histopathological examination was done. The result of histopathological examination shows 38 (63.3%) benign tumors and 22 (36.7%) malignant tumors. The most common benign tumour was mucinous cystadenoma (26.7%) followed by serous cystadenoma (20.0%). The most common malignant tumors were serous cystadenocarcinoma (23.3.0%). The following table is given below in detail:

Table-4: Histopathological diagnosis of ovarian tumours (n=60)

Histopathology of ovarian tumours	Frequency	Percent
Benign		
Seruos cystadenoma	12	20.0
Mucinous cystadenoma	16	26.7
Dermoid cyst	6	10.0
Brenner tumour	1	1.7
Chocolate cyst	1	1.7
Seruscystadenofibroma	1	1.7
Cystadenoma	1	1.7
Malignant		
Serous cystadenocarcinoma	14	23.3
Dermoid cyst with malignant transformation	1	1.7
Mucinous cystadenocarcinoma	3	5.0
Adenocarcinoma	3	5.0
Cystadenocarcinoma	1	1.7
Total	60	100.0

DISCUSSION

In this study the age of patients ranged from 15 to 70 years with the mean age of 41.4 (SD±14.7) years. This result was correlated with the study of others [1, 7]. Hossain *et al*., [8] reported the mean age of the patients with ovarian tumour was 42.1 ± 17.6 years and Bouzari et al., [1] found the mean age of the patients with ovarian tumour was 39.9 ± 9.3 years.

In the current study 70.0% cases were premenopausal and 30.0% cases were post-menopausal. Clarke *et al*., [9] supported this result that 86.1% of patients with ovarian tumours were premenopausal and 13.9% of patients were postmenopausal. Chowdhury *et al*., [10] also found that 68.0% of patients were premenopausal and 32.0% of patients were post menopausal. This study also showed that 86.8% cases were premenopausal and 13.2% cases were post

menopausal among the benign tumour; while 40.9% cases were premenopausal and 59.1% cases were postmenopausal among the malignant ovarian tumours. These findings were also similar to the study of Chowdhury *et al*., [10] that 75.9% of patients were benign and 47.6% of patients were malignant tumour among the 51 premenopausal cases; while 24.1% patients had benign and 52.4% of patients had malignant tumours among the postmenopausal cases.

In our study ultrasonogram score-1 was in 53.3% cases and ultrasonogram score-3 was in 46.7% cases. Of the benign ovarian tumours 6.3% cases had ultrasonogram score 1 and 23.7% cases had ultrasonogram score 3; while of the malignant ovarian tumours 13.6% cases had ultrasonogram score 1 and 86.4% cases had ultrasonogram score 3. Similar findings were observed in the study of others [10, 8].

In the present study serum CA-125 ≥35U/ml was in 46.7% cases and <35U/ml in 53.3% cases found the similar results that serum CA125 was <35U/ml in 62.7%) cases and >35U/ml in 37.3% cases. This study also showed that 21.1% cases had serum CA-125 level ≥35U/ml and 78.9% cases had serum CA-125 level <35U/ml among the benign ovarian tumours; while 90.9% cases had serum CA-125 level ≥35U/ml and 9.1% cases had serum CA-125 level <35U/ml among the malignant ovarian tumours. This result was correlated with the study of Chowdhury *et al.*, [10] that serum CA125 was <35U/ml in 81.5% cases and >35U/ml in 18.5% cases of benign tumour; while serum CA125 was <35U/ml in 19.0% cases and >35U/ml in 81.0%% cases of malignant tumour.

CONCLUSION

According to our study we can conclude that, premenopausal women were more prone to develop ovarian tumor. Where in benign tumor cases majority were mucinous cystadenoma whereas in malignant tumors case serous cystadenocarcinoma were seen commonly. Also, most of the benign tumor had ultrasonogram score 1 where as in malignant cases opposite scenario was seen.

REFERENCES

1. Bouzari, Z., Yazdani, S., Ahmadi, M. H., Barat, S., Kelagar, Z. S., Kutenaie, M. J., ... & Khajat, F. (2011). Comparison of three malignancy risk indices and CA-125 in the preoperative evaluation of patients with pelvic masses. *BMC Research Notes*, *4*(1), 1-4.
2. Obeidat, B. R., Amarin, Z. O., Latimer, J. A., & Crawford, R. A. (2004). Risk of malignancy index in the preoperative evaluation of pelvic masses. *International Journal of Gynecology & Obstetrics*, *85*(3), 255-258.
3. Greenlee, R. T., Hill-Harmon, M. B., Murray, T., & Thun, M. (2001). Cancer statistics, 2001. *CA: a cancer journal for clinicians*, *51*(1), 15-36.
4. Iyer, V. R., & Lee, S. I. (2010). MRI, CT, and PET/CT for ovarian cancer detection and adnexal lesion characterization. *American Journal of Roentgenology*, *194*(2), 311-321.
5. Edmonds, K. (2011). Dewhurst's textbook of obstetrics and gynaecology: John Wiley & Sons; 6th Edition; 590.
6. Kumar, P., Jeffcoate, S. N., & Malhotra, N. (2008). Jeffcoate's principles of gynaecology: Butterworths; Jaypee Brother Medical publishers (Pvt.) Ltd., 56-78.
7. Ashrafgangooei, T., & Rezaeezadeh, M. (2011). Risk of malignancy index in preoperative evaluation of pelvic masses. *Asian Pac J Cancer Prev*, *12*(07), 1727-1730.
8. Hossain, F., Karim, M. N., Rahman, S. M. M., Khan, N., Siddiqui, M., & Hussain, R. (2010). Preoperative detection of ovarian cancer by color Doppler ultrasonography and CA 125. *Bangladesh Medical Research Council Bulletin*, *36*(2), 68-73.
9. Clarke, S. E., Grimshaw, R., Rittenberg, P., Kieser, K., & Bentley, J. (2009). Risk of malignancy index in the evaluation of patients with adnexal masses. *Journal of obstetrics and gynaecology Canada*, *31*(5), 440-445.
10. Chowdhury, S., Khan, M. A. H., Hossain, M. A., Bhuiyan, M. S. H., Mimi, S. A., & Ray, S. (2011). Preoperative Diagnosis of Ovarian Tumours by Risk of Malignancy Index (RMI). *Jalalabad Med J*, 8(1), 20-23.