

## “Socio-demographic Status of Patients with Ovarian Tumour: A study in a tertiary care hospital”

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### Abstract

**Introduction:** Ovarian tumours are a group of neoplasm's affecting the ovary and have a diverse spectrum of features according to the particular tumour entity. The awareness regarding ovarian tumour is in developing phase in Bangladesh. In such condition information regarding socio-demographic status of patients with ovarian tumour may be helpful in the treatment arena of such disease.

**Aim of the study:** The aim of this study was to evaluate the socio-demographic status of patients with ovarian tumour in Bangladesh.

**Methods:** This cross sectional prospective study was conducted at Inpatient department of Obstetrics and Gynaecology of Rajshahi Medical College Hospital during the period from January 2007 to December 2007. A total of 100 consecutive patients were included in this study. All the patients were clinically suspicious of diagnosed of ovarian tumour and also supported by ultra-sonogram and confirmed by laparotomy findings and histopathological findings.

**Result:** In this study among 100 participants the highest number of patients with ovarian tumors was 40 (40%) from 41 to 50 years age group. The highest number of patients were from average middle class families and it was 52%. Then 28 % participants were from poor families and the rest 20% were from upper middle class families. In total 85% participants were married whereas only 15% participants were unmarried. In parity analysis we found only 15% participants were nulliparous whereas 70% were parous.

**Conclusion:** In this study the incidence of ovarian tumour was found more in average middle class patients which was more than 50%. Most cases were from 41-50 years' age group and 85% participants were married. These findings may help the physicians in treating ovarian tumour and can help the researchers in farther research regarding this disease.

**Key words:** Socio-demographic, Ovarian Tumour, Laparotomy.

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### I. Introduction

Tumours of the ovary are common form of neoplasia in women<sup>1</sup>. It represents heterogenous group of disease. Malignant ovarian tumours are the sixth most common female cancer and constitute 7.5% of all gynaecological malignancies and 3.5% of all cancers in women<sup>2</sup>. Ovarian malignancy is the second most common cancer of the female reproductive system and the leading cause of death from gynecologic malignancy.<sup>3</sup> Though it is the 5<sup>th</sup> most common cause malignancy but remain as the leading cause of death among the women with gynaecological cancer. In spite of significant surgical and chemotherapeutic advance in treatment 5 years survival rate have not changed significantly in over 25 years and remains discouraging at 30%. From the clinical behavior of ovarian neoplasm, it is almost impossible to distinguish a benign tumour from its malignant counterpart. So, in most cases it is diagnosed when it becomes already metastatic. Of the ovarian cancer that reports for treatment-80% of ovarian tumours are of epithelial origin, 10% of stromal origin and 5% of germ cell origin, while remainder fall into the other groups<sup>4</sup>. Dysgerminoma of the ovary is an uncommon gynaecological tumour representing 2% of all ovarian malignancies<sup>5</sup>. Cure rates, even in presence of metastases,

are high<sup>6</sup>. Management of stage 1 disease remains controversial with some recommending unilateral oophorectomy as the treatment of choice whilst others advocate radiotherapy in addition to oophorectomy<sup>7</sup>. Numerous factors have been suggested to increase woman's risk of epithelial ovarian cancer but the only two factors of major importance are well supported by epidemiological studies are nulliparity including infertility and family history of ovarian cancer. The familiar aggregation is attributable in part to a family history of ovarian cancer. The familiar aggregation is attributable in part to a family of genes BRCA1 & to a lesser extent BRCA2 which predispose to both breast cancer and ovarian cancer. Increase pituitary gonadotropin stimulation and incessant ovulation are two possible mechanism of the increased risk of ovarian cancer from nulliparity. There is substantial evidence that contraception plays an important role in the reduction of ovarian cancer specially those woman who carries of either BRCA1 & BRCA2 mutation<sup>8</sup>. In contrast, in studies conducted by Mankar and Jain<sup>9</sup> metastatic tumors were 20% and 15.38%, respectively. Various tumour markers have now been developed which may help in differentiating benign from malignant lesions. More importantly, if serum levels are elevated pre-operatively, they are useful in follow-up and the detection of recurrence. For epithelial ovarian tumours the most important of these is serum CA-125, a surface glycoprotein. Elevated values of more than 35 U/ml are found in over 80% of patients with nonmucinous epithelial ovarian cancers but only 1% of the used as tumour markers. In germ cell tumours, the value of tumor markers has been proved for a long time. Alpha-fetoprotein, hCG, Lactic dehydrogenase (LDH) and even CA-125 are used but the first two are more commonly used. Alpha-fetoprotein can be elevated in all expect dysgerminoma and choriocarcinoma, hCG in all except embryonal sinus tumour and immature teratomas. In our country ovarian tumours both benign and malignant are quite common. In total 3.8% ovarian cancers are reported in National Institute of Cancer Research & Hospital (NICRH) in 2005, among 5411 patients in Bangladesh<sup>10</sup>. The burden of cancer has increased in the past few decades in India. Being a developing country, India is growing rapidly and remarkable changes have been observed in the lifestyle, dietary patterns and socioeconomic status (SES).<sup>11</sup> Among the various factors; tobacco smoking, alcohol, obesity and raised blood pressure have been the most harmful adult risk factors for non-communicable diseases in India.<sup>12</sup> Lifestyle risk factors vary for each cancer type. For example, use of tobacco, betel quid chewing, alcohol, low fruits and vegetables intake etc are lifestyle risk factors for oral cancer<sup>13</sup> whereas, age, family history, diet high in saturated fat, high body mass index etc are lifestyle risk factors for breast cancer.<sup>14</sup>

## **II. Objective**

- The main objective of this study was to evaluate the socio-demographic status of patients with ovarian tumour in Bangladesh.

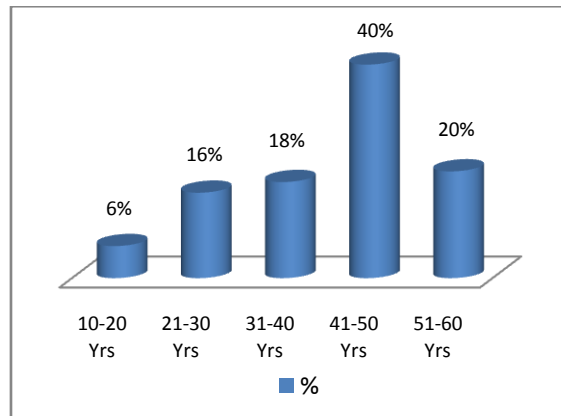
## **III. Methodology & Materials**

This was a cross sectional prospective study and it was conducted at Inpatient department of Obstetrics and Gynaecology of Rajshahi Medical College Hospital, Bangladesh during the period from January 2007 to December 2007). A total of 100 consecutive patients were included in this study. All the patients were clinically suspicious of diagnosed of ovarian tumour and also supported by ultra-sonogram and confirmed by laparotomy findings and histopathological findings. Before starting the intervention proper written consents were obtained from all the participants. This study was approved by the ethical committee of the mentioned hospital. According to the inclusion criteria, clinically suspicious of ovarian tumour and also supported by ultra-sonogram and pelvic masses which were finally diagnosed as ovarian neoplasm were included in this study. On the other hand according to the exclusion criteria, some cases admitted as ovarian cyst and with their relevant symptoms but finally not diagnosed as ovarian neoplasm were excluded from this study. Through proper administrative procedure by the researcher took the verbal consent of the patient to interview and examine her. Finding was recorded after data collection, data were checked for consistency and necessary corrections were made if needed. Data were analyzed by using computer software SPSS.

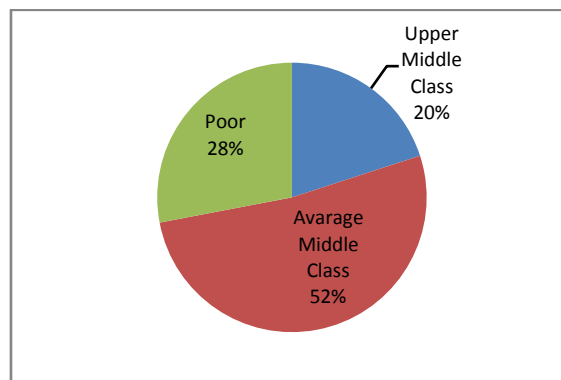
## **IV. Result**

In our study among 100 participants the highest number of patients with ovarian tumors was 40 (40%) from 41 to 50 years age group. Then 20% was from 51 to 60 years age group, 18% was from 31 to 40 years age group, 16% was from 21-30 years age group and rest 6% was from 10-20 years age group. In this study in analyzing the socio-economic status of the participants we found the highest number of patients were from average middle class families and it was 52%. Then 28 % participants were from poor families and the rest 20% were from upper middle class families. In this study we found most of the cases (56%) were the inhabitants of urban areas. On the other hand only 44% were the inhabitants of rural areas. According to the marital status of the total participants of the study we found in total 85% participants were married whereas only 15% participants were unmarried. In parity analysis we found only 15% participants were nulliparous whereas 70%

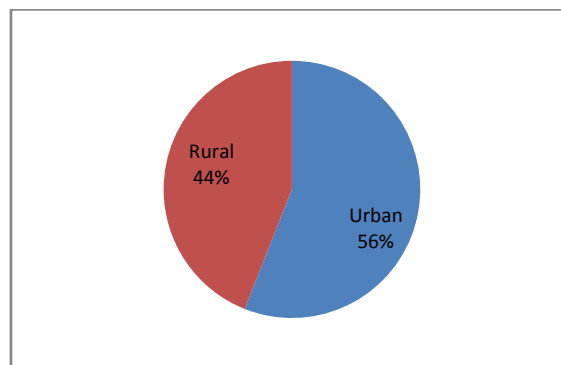
were parous. In analyzing menstrual cycle of the participants we found 70% patients were with normal menstrual cycle whereas 12% were with irregular cycle, 15% were with menopause and rest 3% were in pre-pubertal age.



**Figure I:** Age distribution of participants (N=100)



**Figure II:** Socio-economic status of participants (N=100)



**Figure III:** Living places of participants (N=100)

**Table I:** Distribution of parity & marital status (N=100)

Parity	n	%
Unmarried	15	15
Married	85	85
Nulliparous	15	15
Parous	70	70

**Table II:** Menstrual cycle of the cases (N=100)

Menstrual cycle	n	%
Normal cycle	70	70%
Irregular cycle	12	12%
Menopause	15	15%
Prepubertal age	3	3%
Total	100	100%

## V. Discussion

In our study among 100 participants the highest number of patients with ovarian tumors was 40 (40%) from 41 to 50 years age group. Then 20% was from 51 to 60 years age group, 18% was from 31 to 40 years age group, 16% was from 21-30 years age group and rest 6% was from 10-20 years age group. Protective effect of high parity & link between parity & ovarian cancer has been attributed to their impact on ovulatory frequency leading to the “incessant ovulation” theory of the cause of ovarian cancer<sup>4</sup>. In a study of 550 cases of ovarian tumour by Mildred and Dockerty, 80% were married and 67.2% were parous. In the present series, 70 (70%) cases were parous, 15 (15%) cases nulliparous & 15 (15%) cases were unmarried. In a study they stated, approximately 1 in 70 newborn girls in the USA will develop ovarian cancer during her infetime<sup>8</sup>. In most of the studies done regarding relationship between family history and ovarian tumour, no conclusive evidence was found that it is an inherited disease. There is genetic mutation which is inherited subsequently. In this study, only 5 (5%) patients gave the history of ovarian tumour in her 1<sup>st</sup> degree relations. This figure is not significant but this study was compared with previous works and was found positive family history<sup>8</sup> of 5.71%. In this study the most common symptom (90%) was lump in lower abdomen, vague abdominal discomfort and occasional lower abdominal pain was in 60% of cases, flatulence and dyspepsia with loss of appetite was found in 15% of cases. Other symptom such as loss of weights was 21%, feeling of distension 26%. Abnormal vaginal bleeding 12% and respiratory problem was in 10% cases. In this study most frequent duration was 0-6 months (40%) which is consistence with previous studies. In the present study 90 (90%) cases had anaemia, of which 14 (14%) were severely anaemic. Mass in the abdomen was detected in 90 (90%) cases. Mass was fixed in 24 (24%) cases and mobile in 76 (76%) cases. Mass was tender in 54 (54%) cases. Ascites was present in 13 (13%) cases. One of the previous studied showed anaemia 82.86% 37 cases & 88.0% 38 cases & 91% cases. So, the incidence of anaemia is almost consistent with the previous studies, reflecting the poor socioeconomic condition of our country. Vaginal examination was tried in unmarried patient but failed and they were diagnosed by per rectal examination. In 69% cases, mass was separate from the uterus. So 69 cases were the diagnosed clinically as obvious ovarian neoplasm before laparotomy. The finding was comparable with previous studies. In total 18.82% cases mass could not be separated from uterus in this study which is consistent with previous studies. The commonest symptom in the present study was abdominal pain and discomfort and it was more than 60%. This is similar to a study by Rashid et al, in which 59% of the patients had abdominal pain while mass/distension was seen in 37% of the patients.<sup>15</sup> In the present study, in 100% cases ultrasonography was done. In previous study it was shown that ultrasonography was done in 92.0% cases, which is less than the present study mostly due to less availability<sup>8</sup> of ultrasonogram at that time & accuracy of previous study was 96.84%, which is more than the present study. In the present study, 82% cases had unilateral tumour, 18(18%) cases were had haemorrhagic peritoneal fluid. Adhesions to surrounding structures was found in 6(6%) cases, peritoneal seeding in 9(9%) cases. All bilateral tumours were not malignant. All cases with haemorrhagic peritoneal fluid and peritoneal seeding, latter on confirmed as malignant neoplasm histopathologically. Results are almost consistent and it was found that percentage of right-sided neoplasm is slightly more than left-sided which does not prove that incidence is more in left side. It may be due to study of small number of cases. The macroscopic size of the neoplasm ranged from 6-36cm. In this series 28(28%) cases ranged from 6-10cm had an in 34(34%) cases ranged from 11-15cm, 20(20%) cases ranged from 16-20cm, 10(10%) cases ranged from 21-25cm, 4(4%) cases ranged from 26-30cm, 4(4%) cases ranged from 31-35cm. Ovarian neoplasm may be of variable size, of them mucinous cystadenoma teaching enormous proportions. Shaw (1932) reported a number of benign tumours weighing more than 200lbs, the heaviest being a case described by Spohn of Texas which weighed 328lbs (148kg). Cut section showed unilocular tumour in 68(68%) cases, multiloculated in 32(32%) cases, serous fluid in 40(40%) cases, thick viscid mucoid fluid in 24(24%) cases, thick sebaceous fluid in 10(10%) cases, and partially<sup>8</sup> haemorrhagic fluid in 8 (8%) cases. Ovarian tumour is leading cause of death of women. Treatment differs in different stages of cancer. Conventionally, ovarian malignancy was treated by aggressive surgery. Now-a-days conservative surgery is being increasingly practiced, for stage 1 malignant epithelial tumours of the ovary and young childless women. Several authors has compared conservative versus radical treatment for common epithelial carcinoma of the ovary. Mulnnel studied 133 patients of ovarian cancer, 28 patients were treated by conservative surgery, One hundred and five (105) patients were treated radically. Five (5) years survival rate was 75% in both groups. In the present study 24(24%) cases were treated by cystectomy who was younger age group and unmarried. One sided salping-oophorectomy was done in 28(28%) cases who were young married and family was not completed. The masses were benign in these cases which were confirmed by histopathology. In total 34(34%) cases total abdominal hysterectomy with bilateral salpingo-oophorectomy was done who were in peri-menopausal women and family was completed. These were proved to be benign, confirmed by histopathological reports. Palliative surgery was done in 3(3%) cases where tumors were too large with excessive adhesion. Later on they were proved as malignant tumour. Omentectomy was done for 2 purposes, first staging of the tumour and second is prophylactic removal of possible sources of metastasis. In this present study in 13(13%) cases omentectomy was done which were proved malignant after

histopathology. In this study the incidence of ovarian tumour was found more in average middle class patients which was more than 50%. Most cases were from 41-50 years' age group and 85% participants were married. These findings may help the physicians in treating ovarian tumor and can help the researchers in further research regarding this disease.

### **Limitations of the study**

This was a single centered study with a small sized sample. So the findings of this study may not reflect the exact scenario of the whole country.

## **VI. Conclusion And Recommendations**

For getting more specific findings we would like to recommend for conducting more studies regarding the same issue with larger sized sample in several places.

### **References**

- [1]. Lee-Jones, L. Ovarian tumours an overview. Atlas Genet cytogenet Oncol Haematol December-2003
- [2]. Dorigooliver, Md & Baker VV MD. Premalignant & malignant Disorders of the ovaries & oviducts. DeCherney AH, Nathan Lauren, editors. Current Obstetric & Gynaecological Diagnosis & treatment. 9th edition USA, The McGraw-Hill Companies. 2003:933-946.
- [3]. Jemal A, Murray T, Samuels A, Ghafoor A, Ward E, Thun MJ. Cancer statistics, 2003. CA Cancer J Clin 2003; 53:5-26.
- [4]. Neerja, Bhatla, MD. Tumour of the ovary. In: Jeffcoate's Principles of Gynaecology. Sixth edition. 2001:503-540.
- [5]. Gallion H, H, Nagell J.R.V Donaldson E.S & Powel D.E (1998) ovarian dysgerminoma: Report of seven cases and review of the literature. Am J Obstet Gynaecol 158, 591-595
- [6]. Asadourian L.A, Usar M.C & Taylor H.B (1969) Dysgerminoma. An analysis of 105 cases. Obstet Gynecol 33, 370-379.
- [7]. Lucraft H.H (1979) A review of 33 cases of ovarian dysgerminoma emphasizing the role of radiotherapy. Clin Radiol 30, 585-589.
- [8]. Gail R. Walker, PhD, James J. Schlesselman, PhD and Roberta B. Ness. MD. Family History of cancer, oral contraceptive use and ovarian cancer risk. Am-J-Obstet-Gynaecol, Volume 186. Number 1.
- [9]. Mankar DV, Jain GK. Histopathological profile of ovarian tumours: A twelve year institutional experience. Muller J Med Sci Res 2015; 6:107- 11.
- [10]. Hospital cancer Registry, NICRH, Annual report 2005. Directorate General of Health Services Ministry of Health & Family Welfare supported by: WHO.
- [11]. National Centre for Disease Informatics and Research, National Cancer Registry Programme (ICMR), Bangalore. Time trends in cancer incidence rates: 1982- 2010; Trends over time for all sites and on selected leading sites of cancer. 2013. Available from: [http://ncrpindia.org/ALL\\_NCRP\\_REPORTS/TREND\\_REPORT\\_1982\\_2010/ALL\\_CONTENT/ALL\\_PDF/Preliminary\\_Pages.pdf](http://ncrpindia.org/ALL_NCRP_REPORTS/TREND_REPORT_1982_2010/ALL_CONTENT/ALL_PDF/Preliminary_Pages.pdf)
- [12]. World Health Organization. WHO - Non communicable Diseases (NCD) Country Profile 2014 for India. 2014. Available from: <http://www.who.int/countries/ind/en/>
- [13]. Petti S. Lifestyle risk factors for oral cancer. Oral Oncol. 2009;45(4-5):340-50. <http://dx.doi.org/10.1016/j.oraloncology.2008.05.018>; PMID:18674956.
- [14]. McPherson K, Steel C, Dixon JM. ABC of breast diseases: breast cancer epidemiology, risk factors, and genetics. BMJ. 2000;321(7261):624-8. PMID:10977847, PMCID:PMC1118507
- [15]. Rashid S, Sarwar G, Ali A. A clinicopathological Study of ovarian cancer. Departments of Radiotherapy and oncology Sir Ganga Ram Hospital and Mayo Hospital Lahore. J Pak Med Assoc. 1998;36:117-25.

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