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Awareness of Ovarian Cancer Amongst Post-Menopausal Women: An Observational Study

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ABSTRACT

Introduction: Ovarian cancer is a malignant tumor that forms in the ovaries which are part of the female reproductive system. Ovarian cancer is sometimes referred to as the "silent killer" as, until it reaches an advanced stage, it may not exhibit any signs. Ovarian cancers remain amongst the top ten commonest causes of death due to gynaecological cancers.
Aim: The aim of the present study is to evaluate the awareness of symptoms, risk factors, diagnostic tests, treatment options and areas of spread of ovarian cancer amongst post-menopausal women.
Materials and method: This is an observational study in which 203 postmenopausal women of nonmedical professions were included through purposive sampling. The sample size was calculated with the help of latest version of SPSS Software. Data was gathered with the help of a self-structured questionnaire with a particular focus on risk factors, symptoms, treatment options, diagnostic tests and areas of spread of ovarian cancer.
Result: Of 203 women, 31.03% reported awareness of various domains of the questionnaire about ovarian cancer, whereas there was a lack of awareness seen in 68.97% women.
Conclusion: We can conclude from this study that the general female community had very low awareness regarding the symptoms, risk factors, areas of spread, diagnostic tests and treatment options related to ovarian cancer.

Keywords: Awareness, Ovary, Malignant, Inherited genetic mutation, Hereditary Ovarian Cancer Syndrome

INTRODUCTION

Ovarian cancer is a malignant tumor that forms in the ovaries which are part of the female reproductive system.(1) Ovarian cancers remain amongst the top ten commonest causes of death due to gynaecological cancers. In India, there were 13,24,413 newly diagnosed cases of cancer of which 3.5% were cases of ovarian cancer causing 3.8% deaths. The age standardized incidence rate was 6.7 per 100,000 and mortality rate was 4.8 per 100,000. Estimated number of cases by the year 2025 is 1,03,716.(2) Ovarian cancer is sometimes referred to as the "silent killer" as, until it reaches an advanced stage, it may not exhibit any signs.

Several risk factors of ovarian cancer include advanced age, sedentary lifestyle, obesity, genetic predisposition, family history of breast and ovarian cancer, hormone replacement therapy, cigarette smoking etc.(3) Growing older with age, the risk of having ovarian cancer rises. Increased incidence of this cancer is more pronounced in women over 65 years of

age.[3,4] Ovarian cancer are substantially more likely to strike women who inherit a BRCA1 or BRCA2 gene mutation.[3] The BRCA1 and BRCA2 proteins are essential for DNA repair. Their loss of functionality makes some cells extremely sensitive to DNA damage, including damage that causes cancer. Women who have mutations in the BRCA1 or BRCA2 genes have a very high lifetime risk of ovarian cancer.[3]

Ovarian cancer risk is correlated with a positive family history of certain cancers, including ovarian cancer itself as well as breast cancer. This is due to the possibility that these tumours are brought on by inherited mutations in BRCA1 & BRCA2 genes, which result in a familial cancer syndrome.[4] Body mass index (BMI) of 30kg/m^2 or higher increases the chance of developing ovarian cancer. Fat tissue also called as adipose tissue produce excess amount of oestrogen, high levels of which have been associated with an increased risk of ovarian cancer. It promotes tissue division and proliferation, which increases the possibility of cancer-causing mutations.[5] Central adiposity is associated with an increased risk of ovarian cancer, indicating the conversion of androgen in the peripheral tissues.[3,6] Increased levels of sex hormones, particularly oestrogen and its metabolites produced by peripheral adipose tissue, are linked to sedentary behaviour and obesity.[3,6]

Numerous reproductive health issues, including painful menstruation, polycystic ovarian syndrome (PCOS), dense breast tissue, fibroids, and pain due to endometriosis can also be brought on by an excess of oestrogen in the body.[7] Women who use oestrogen alone or in combination with progesterone after menopause have a higher chance of developing ovarian cancer than women who have never used hormones. Also, infertility may increase one's risk of ovarian cancer due to higher quantity of oestrogen. Cigarette smoking causes ovarian cancer by damaging the DNA in our cells. DNA controls how our cells grow and behave. Damage to DNA causes cells to behave in ways that they're not supposed to and the build-up of DNA damage over time can lead to a tumor formation.[8]

Early detection of ovarian cancer might be difficult because the disease sometimes exhibits oblique or vague symptoms. One typical sign is persistent, unexplained pelvic or abdominal pain which might be throbbing or mild aching in nature. Vaginal bleeding that is frequent and chronic is often accompanied by a feeling of fullness. Constipation or diarrhoea that persists despite no apparent connection to food changes or other external causes, loss of appetite or feeling full quickly may also be sign of ovarian cancer. Persistent and unexplained fatigue, often accompanied by generalized weakness, can also be a symptom. However, fatigue is a common symptom in many conditions, so it's not specific to ovarian cancer. For postmenopausal women, any vaginal bleeding or spotting should be investigated. In premenopausal women, changes in the menstrual cycle, such as irregular periods or heavy bleeding, may be warning signs.[9]

One of the distinctive challenges of ovarian cancer is its tendency to remain asymptomatic in its early stages, earning it the nickname "the silent killer." Symptoms often go unnoticed until the cancer has reached an advanced stage, making early detection difficult. Compared to other gynaecological malignancies like those of the cervix and uterus, patients with ovarian cancer suffer from the highest mortality rates.[10] It is a life-threatening and serious disease. Since there is presently no public health screening program for ovarian cancer early identification, the majority of patients with the disease receive an advanced or metastatic disease diagnosis, which is linked to a high mortality rate.[11]

It has been observed that post-menopausal women have a higher risk of ovarian cancer compared to pre-menopausal women. Understanding this risk can help with early detection and prevention. Thus, this study

was done to assess the awareness about ovarian cancer in post-menopausal women.

MATERIALS & METHODS

The current observational study was done in a tertiary care center. Women over the age of 45 years of non-medical professions were included in the study. The sample size was 203. This sample size was calculated with the help of the latest version of SPSS software and purposive sampling was used in order to achieve the total target. Women diagnosed with ovarian cancer or any obstetric or gynaecological conditions in the past were excluded from the study. An ethical approval was obtained from the Institutional Ethical Review Committee. A written informed consent was taken from all the participants in the study who fulfilled the inclusion criteria. The study was explained to each participant and they were asked to fill a self-structured questionnaire. The questionnaire had 11 items regarding the awareness of risk factors, symptoms, areas of spread, diagnostic measures and treatment options available for ovarian cancer patients. On completion of questionnaire, data was collected offline, physically in the presence of either of the investigators from the participants. Results were calculated and analysed using Microsoft Excel 2013.

RESULT

It was seen that 29.6% participants reported that 50-60 years was the commonest age group amongst women to be diagnosed with ovarian cancer (Figure 1). Various risk factors were reported of which advanced age and pelvic inflammatory diseases were the commonest risk factors associated with ovarian cancer (Figure 2). Figure 3 shows the awareness of the symptoms of ovarian cancer wherein low back pain was reported to be the commonest symptom. Figure 4 shows that 24.6% of the study population was aware of the liver and kidneys being the sites of metastases of ovarian cancer followed by brain, bone and lungs. Figure 5 shows awareness of the diagnostic measures used to detect ovarian cancer. Figure 6 shows awareness of treatment options available for the management of ovarian cancer.

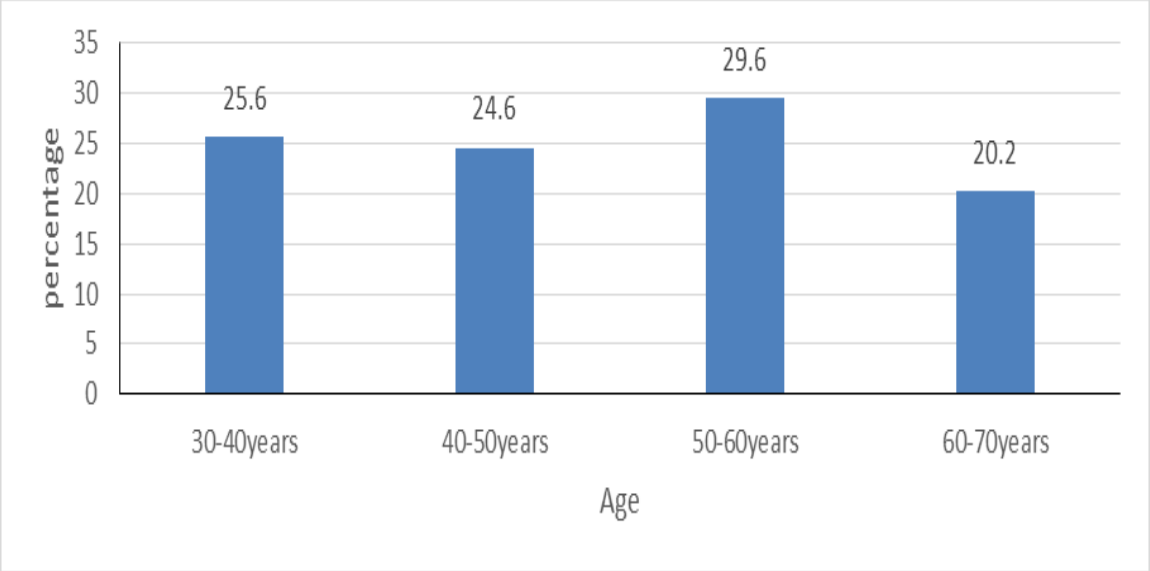

Figure 1: Awareness of commonest age group in whom ovarian cancer is diagnosed

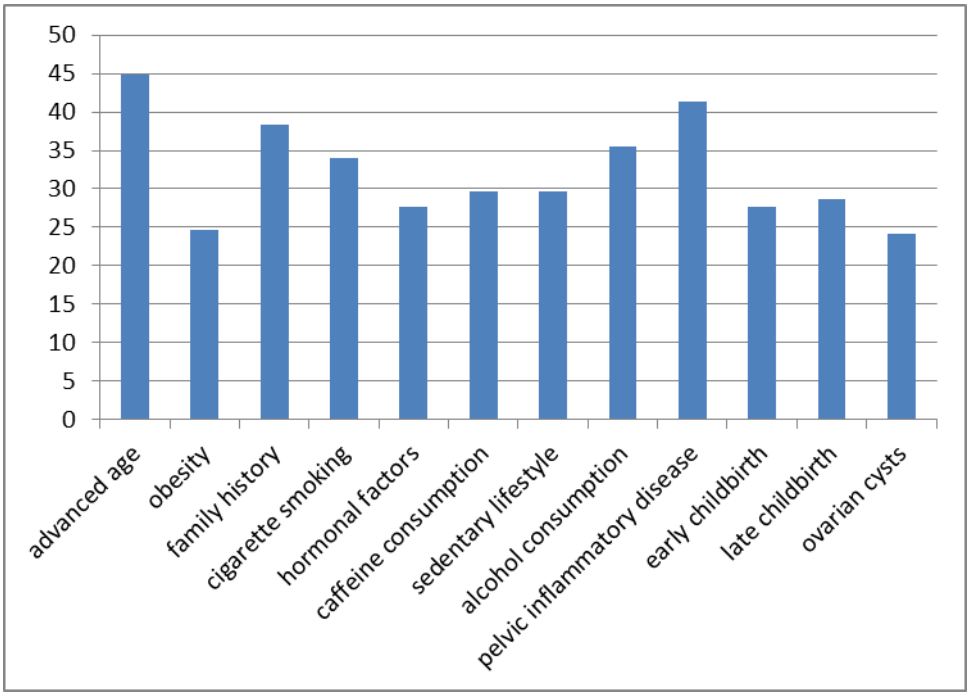

Figure 2: Awareness of risk factors reported for ovarian cancer

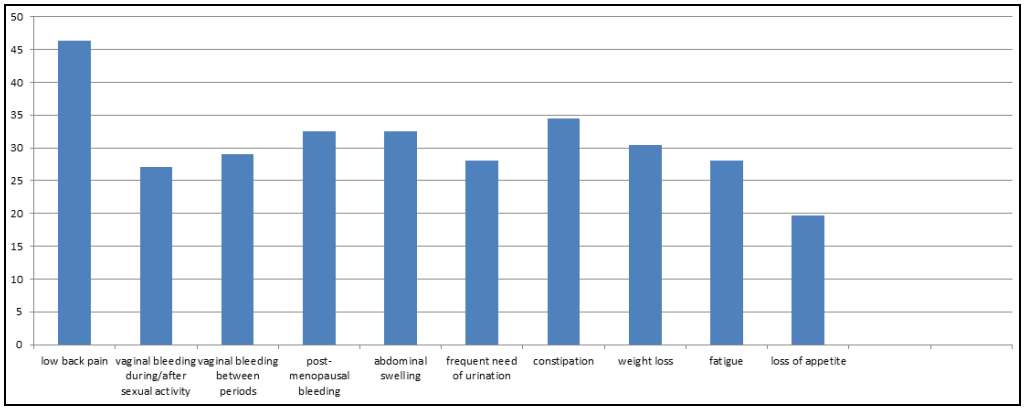

Figure 3: Awareness of signs and symptoms reported for ovarian cancer

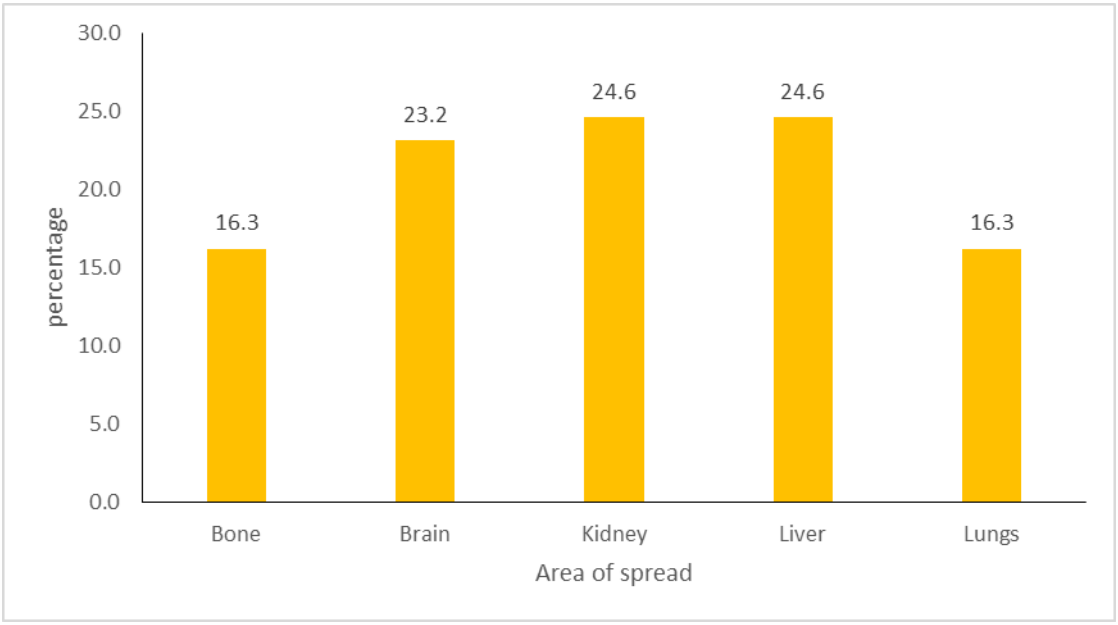

Figure 4: Awareness of signs and symptoms reported for ovarian cancer

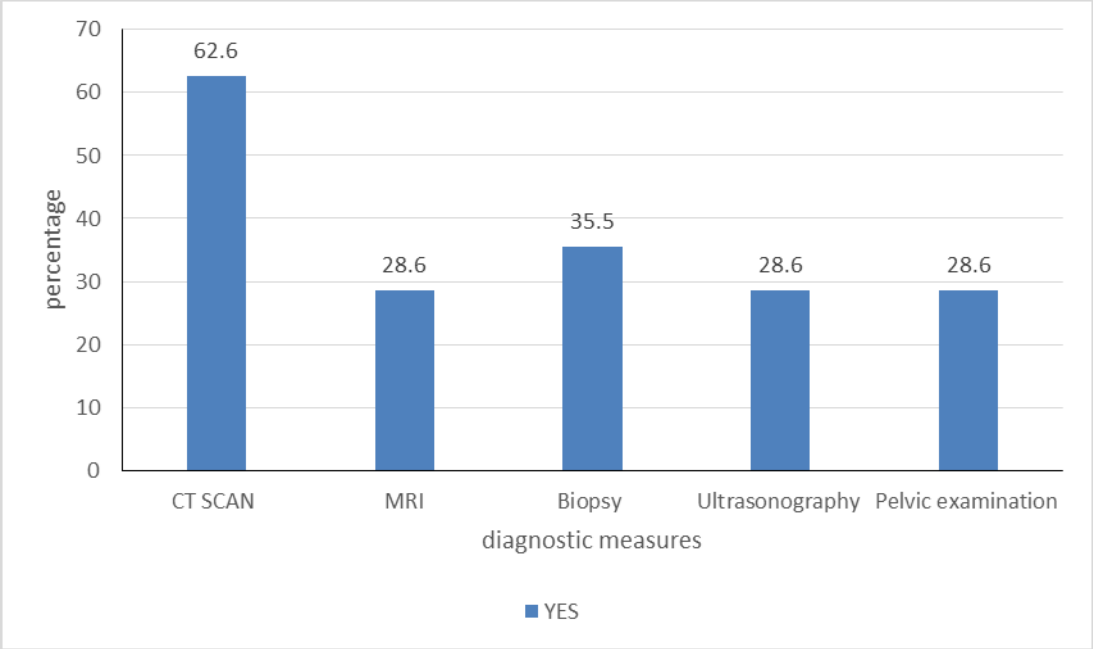

Figure 5: Awareness of diagnostic measures reported for ovarian cancer

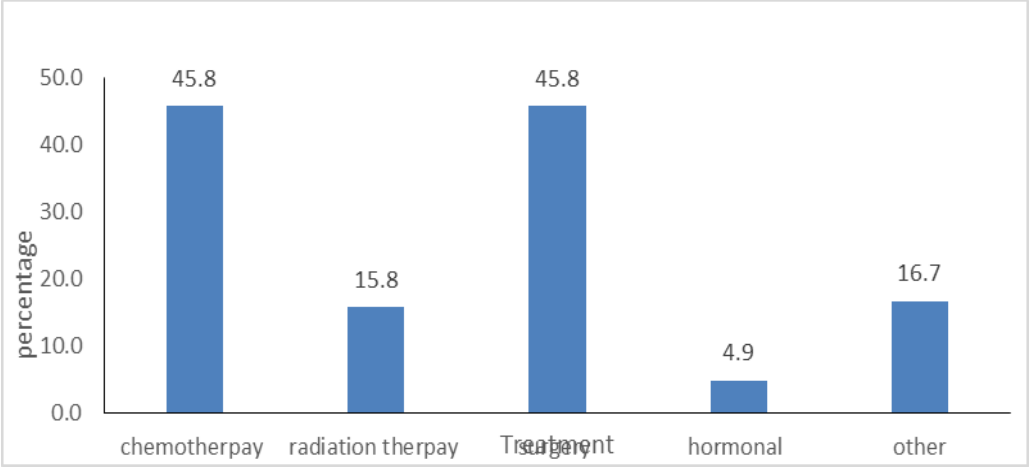

Figure 6: Awareness about treatment option reported for ovarian cancer

DISCUSSION

The present study was conducted to assess awareness of ovarian cancer in post-menopausal women. A total of 203 samples were included of which it was seen that overall, there was a lack of awareness regarding various domains of the questionnaire about ovarian cancer.

Redhwan Al-Naggar et al has stated in their study that Malaysian married women reported very poor information regarding ovarian cancer. This may be due to lack of awareness of risk factors, signs and symptoms of ovarian cancer. Similarly poor knowledge was reported among the participants in terms of symptoms of ovarian cancer. Nationwide primary care clinics have to be particularly active in educating patients about symptoms and risk factors of ovarian cancer.[12] Elshami et al also found that only 15.2% of Palestinian women were found to have high understanding of the risk and preventive variables for ovarian cancer, indicating a general lack of awareness among this population.[13] Adeyemi Adebola Okunowo et al reported that although the majority of the women in their survey were poorly aware of the condition, they possessed very little information of the signs, symptoms, and risk factors of ovarian cancer. This is consistent with the results of other studies

that have shown women to have very less awareness of ovarian cancer. Nigerian women, similarly, have very inadequate awareness of the signs and risk factors of ovarian cancer [(14)].

Approximately 15% of American women stated that they were either familiar or extremely concerned with the indications of ovarian cancer in the same way. The general population's awareness of the symptoms and risk factors of ovarian cancer among women is low. Raising women's knowledge of risk factors and symptoms may aid in reducing delays in diagnosis because ovarian cancer is frequently discovered at advanced stages, when treatment is challenging.[(15)]. Research has indicated that in order to promote early presentation and identification of the illness, it was imperative to increase awareness of ovarian cancer and educate women about its symptoms and risk factors.[(16)].

The present study suggests that there is lack of awareness about risk factors. Soon Lean Keng et al their research showed that Malaysian women knew very little about the risk factors for ovarian cancer. It was discovered that about three-quarters of them were unaware of it. This result was consistent with earlier research in Malaysia and other nations showing little knowledge of ovarian cancer and other cancer types even though most people had heard of cancer [(17)].

The present study suggests that there is lack of awareness of ovarian cancer similarly Rini.R Naik et al. also suggests that about one-third of the women had ever heard of ovarian cancer; however, only 3.5% women had good level of awareness, 13.4% had fair level of awareness, and 83.1% women had poor level of awareness of ovarian cancer. A significant portion of women (43.7%) lacked knowledge about ovarian cancer screening, treatment options, and prognoses. In Goa, women were not well-informed about ovarian cancer, its symptoms, risk factors, or the disease's high death rate. It was imperative that women get health education on the disease in order to facilitate ovarian cancer screening, diagnosis, and treatment.[(18)]

Studies in time with our finding suggest that Brain et al also found that in the general community, women often may not identify many of the symptoms associated with ovarian cancer. If delays in presentation are to be reduced, programs based on evidence are required to both raise public awareness and remove barrier to identifying and treating ovarian symptoms.[(19)]

The present study shows that there is lack of awareness about signs and symptoms. A similar study done by Freij et al suggests that Jordanian women's knowledge of ovarian cancer symptoms was low. This had a critical role in determining their decision to seek early medical care and consequently an earlier diagnosis. The findings showed that they had low understanding and being aware of the risk factors and symptoms of ovarian cancer. Using a change or deployment strategy is highly suggested to change women's attitudes towards early detection practices and programs and to increase their understanding of the signs of ovarian cancer. Therefore, a nationwide awareness campaign would appear both necessary and urgent give the lack of an efficient screening program to discover this malignancy; nevertheless, it must first be proven to be successful before being implemented. The main objective of such a program would be to inform women about the concerning signs and risk factors connected to ovarian cancer. It is hoped that this campaign would boost women's self-assurance in identifying symptoms.[(20)]

Maryam et al also reported that study findings showed that women living in the western region of Iran have moderate awareness of ovarian cancer and insufficient knowledge of cancer warning signs; this suggests that it was necessary to train Iranian women to raise awareness of the signs and risk factors for ovarian cancer. 60.9% of participants in this research declared a medium level of knowledge about the topic. Additionally, 73.3% of participants were unsure about the

symptoms associated with ovarian cancer, according to the study.[21]

A study done by Goff et al showed a correlation between the minimal awareness level and the primary symptoms of ovarian cancer. Only Few of the participants were aware that ovarian cancer might present with symptoms such as chronic pelvic and abdominal discomfort, which can be quite concerning. Women diagnosed with ovarian cancer may experience more severe and frequent symptoms of the disease than women in general, including constipation, increased abdominal size, and pelvic and abdominal discomfort.[22]

Emma L Low et al. reported that according to study that there is a lack of knowledge in the UK on the signs of ovarian cancer, and there are significant differences in awareness between them.[23]

CONCLUSION

We can draw the conclusion from this study that the general female community had very low awareness regarding the symptoms, risk factors, regions of spread, diagnostic procedures, and treatment options related to ovarian cancer.

Females of younger age could have been involved in the study so that they would have acquired knowledge regarding this disease so has to prevent in the future.

Declaration by Authors

Ethical Approval: Approved

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Conflict of Interest: The authors declare no conflict of interest.

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