Factors Of Cervical and Breast Cancer: A Survey At Aiims, Jodhpur

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ABSTRACT

PURPOSE - Purpose of the study was to assess the risk factors and warning signs of cervical and breast cancer.

METHOD- A descriptive survey study was conducted on 800 females visiting OPD of AIIMS Jodhpur, a self-structured tool was used; data were collected through semi-structured interview and analysis with SPSS-16.

RESULT- out of 800, 37.5% of the females were in the age group of 18-30 years, 62.5% had normal BMI, nearly one third (30.9%) were illiterate and 61.9% were homemakers. In screening only 4.5% were undergone Pap smear, 5.4% were performing BSE and only 2.9% had undergone breast sonography or mammography. Out of 800 females, 799 had one or more risk factors. The major risk factor was not taking cervical cancer vaccination (98%).71.2% had a non-circumcised sexual partners. 13.2% and 12.2% had early menarche and late menopause respectively. 59.2% of respondents were not involved in regular physical exercises and 54% of females were not consuming fruits daily. 3.6% were having bleeding in between periods and 0.6% had bleeding after menopause, 1.9% reported lump, mass or dimple in the breast and 2.2% reported change in size or shape of the breast. There was a significant association of age (p=0.002) and BMI (p=0.002) with screening.

CONCLUSION – This study concludes that the majority of females had one or more risk factors of breast and cervical cancer and they had never undergone any screening test. It was found that there was a significant association of screening with age and BMI both.

KEYWORDS: Cervical Cancer, Breast Cancer, Cancer Risk Factors, Oncology Screening, Cancer Warning Signs, Gynecological Cancer.

INTRODUCTION

Cancer is a non-communicable disease in this body develops an uncontrolled cellular growth with a lower degree of cellular differentiation and metastatic potential.[1] Breast cancer is uncontrolled cellular growth in the breast cells which eventually progress into a tumor[2] and cervical cancer is cancer that develops in cells of the cervix.[3]

According to Globocan data 2018, worldwide 1, 80, 78,957 new cancer cases were diagnosed and 95, 55,027 cases died due to cancer. Out of that, 6.6% were of breast cancer and 3.2% were due to cervical cancer.[4] In India,   11, 57,294 cancer cases were diagnosed and 7, 84,821 cases died due to cancer. Breast cancer is the leading cause of death in India with 11.1%, and deaths due to cervical cancer are 7.7% of total cancer deaths.[4] Breast cancer is also having the highest incidences among all the cancers that are 14% and ca cervix is at 3rd position with 8.4% in all the new cases.[4]

Majority of the women are not aware of risk factors of breast and cervical cancer.[5] The risk factors of the breast cancer are family history, BRCA-1 BRCA -2 gene mutation, smoking, lack of physical activities, obesity, HRT, lack of breastfeeding, less fruits and vegetables in diet, consumption of alcohol and smoking.[2-5] screening for cervical and breast cancer is also recommended .[6]

METHOD-

A cross sectional survey was conducted at OPD of AIIMS, Jodhpur, Rajasthan, India. Females aged more than 18 years, residing in Jodhpur were included through purposive sampling technics. The females who understood Hindi or English language were included and the females who were attending Gynecology OPD, psychiatric OPD, or pregnant, were excluded.
Sample size was calculated by assuming the population as a large population (10, 00,000)   hypothesized frequency 15.5% of outcome factor in the population with the use of OpenEpi, Version 3, open-source calculator SSPropor.[7] For the 0.01% confidently level. Self-structured tool was used for data collection, its validity was established by the opinion of experts and reliability was calculated by the test re-test method by using SPSS-16. All females were educated about screening services; and those who were having warning signs were referred to oncology OPD. Approximate time taken to complete the interview was ranging from 15 to 20 minutes.

RESULTS

SECTION-1: DESCRIPTION OF PERSONAL VARIABLES OF THE SUBJECTS

It was found that 37.5% females were 18 to 30 years of age, more than half (62.5%) were having normal BMI, nearly one-third of the total (30.9%) population was illiterate, and 61.9% were homemakers. Nearly one fourth (24.8%) of the population was having a family income below 10 thousand, 87% were vegetarians, 85.4% were married, nearly half were residing in rural areas (51.5%) and three fourth(76%) were having an active lifestyle.

SECTION-2: FREQUENCY PERCENTAGE OF SCREENING STATUS

Out of 800 females 4.5% underwent a pap smear test, 5.4% were doing regular breast self-examination, only 2.9% were undergone breast sonography or mammography and only 0.6% were underwent for genetic testing at the same time none of them was able to describe anything about the test.

SECTION-3: FREQUENCY AND PERCENTAGE OF RISK FACTORS

Table - 3 depicts the risk factors according to domains. In cervical cancer-related risk factors, there were two different domains, personal history related and sexual-history related risk factors. Data was showing that 98% of the females were not vaccinated for HPV; 12.9% were started sexual activity before the age of 16 years. One of the major risk factors that came out was a parity score of more than 2 (31%). Non-circumcised partner was present in 71.2%. Positive HIV status was lest common risk factor (0.2%). In breast cancer related risk factors in this there were 2 domains; in history related risk factors early menarche was present in 13.9%. Breastfeeding less than one year was present in 38.5%; consumption of Oral contraceptive pills (OCP) for more than 6 years was there in 19%. In risk factors related to both, 2.4% were having a family history of breast or ovarian cancer. In lifestyle-related risk factors, the most frequent were not doing physical exercises and not consuming fruits daily. Smoking and consumption alcohol was present in 0.5% and 0.1%

SECTION - 4: FREQUENCY AND PERCENTAGE OF WARNING SIGNS

Table - 4 depicts the number of risk factors in females was 0 to 12. Only 1 out 800 females was having no any risk factors, and nearly one-fourth (22.9%) were having 4 risk factors, 6, 7 and 8 risk factors were present in 14.9%, 7.1%, and 2.1% respectively. 0.5% and 0.4% of females were having 9 and 12 risk factors respectively

SECTION - 5 ASSOCIATION OF SCREENING STATUS WITH SELECTED PERSONAL

Table - 5 depicts warning signs of cervical and breast cancer. Bleeding in between 2 menstrual cycles was there in 3.6% females, pain after sexual activity was there in 2.1% population, bleeding after sexual activity was present in 0.9%, lump mass or dimple was present in 1.9%, and 2.2% were noticed change in size or shape of the breast.

SECTION- 6: OTHER FINDINGS

Table - 6 depicts number of the warning signs present in the population and it was 0 to 6, majority of the females (88.4%) were having no any warning sign 7.6% of the females were having any one warning sign, 2.0% of the females were having 2 warning signs related to breast and cervical cancer 3 and 4 warning signs were present in 1.4% and 0.4% of the population.

Table - 7 depicts the obtained Chi-square values, df, and association of personal variable and screening, and there is significant relation in age and screening status (p =0.002) and BMI and screening status (p=0.002).

Out of total 800 females, 31.2% of the females were not aware of their HIV status 1.3% were not knowing that whether they have taken the cervical cancer vaccine or not and 4.5% of the women were not aware that their partner is having S.T.D. or not.

DISCUSSION

Cervical and breast are the two most common cancer in females and they are even more common in developing and underdeveloped nations.[7] In India screening and early detection rates of these cancers are very low. In a similar study conducted in Mumbai found that use of contraceptive pills was 2.8% and in this study use of oral contraceptive pills is 2.4%.[9] In a study conducted in Udupi none of the women were diagnosed with breast cancer but in this study 4 females had the previous history of breast or ovarian cancer.[9]

Karadag S.et.al.conducted a survey in Turkey on 1,886 non-pregnant, and in breast cancer risk factors 17.2% did not eat vegetables, 1.4% consume alcohol, 33% were breastfed for less than 1 year, 16.9% were post-menopausal there age of menopause was above 55 years, 8.4% were having a history of hormonal replacement therapy (HRT) more than 5 years, early menarche was present in 27%, 3.8% used contraception pills for more than 5 years, and 22.1% had a history of breast cancer whereas in the present study almost half(54%) of the population were not consuming fruits in the daily diet only 0.5% females were consuming alcohol 38.5% were yet not breastfeed their child for at least one year, total 12.22% were post-menopausal and out of that 1.5% were having their

menopause after 55 years of age only 1% consumed HRT and use of oral contraceptive pills was in 2.4% of the females. Early menarche was there in 13.9% of the females and history of breast cancer was there in 2.4% of the females. On cervical cancer part, 20.2% had an untreated vaginal infection, 89.6% had more than 3 deliveries, and 17.8% had their first sexual activity before the age of 16 whereas in present study 10.2% of the females had a history of frequent genitourinary infections and 4% have stared their sexual activity before age of 16 years[9]. In a study conducted by Malvia et. Al. it was found that in metro cities the major risk factors were an area of living, breastfeeding, waist-hip ratio, tobacco, alcohol consumption, lack of physical exercises and environmental factors and in the present study similar results were found. [10] Data are not exactly similar might be because of the different study settings and different sample sizes.[10]

Conclusion

Breast and cervical cancer are two most common cancers in females. In present study that one-third of the population (37.5%) was of 18 to 30 years of age, 22.2% were overweight (BMI=25.0-29.9). Bleeding in between menstrual cycles was there in 3.6% only 4.5% were undergone for Pap-smear and only 5.4% were doing BSE on a regular basis. The most common risk factors were not taken cervical cancer vaccine, non-circumcised sexual partner, and lack of physical exercises, not consuming fruits daily and the least common risk factors were smoking history of cancer. Risk factors of cervical cancer were present in the majority of the females. The main risk factors that came out were related to sexual history and lifestyle.

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