Assessment of knowledge and attitude towards cancer cervix among adult women

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Abstract

Background: Cancer cervix is the most malignant neoplasms striking women at a young age. It is relatively asymptomatic in early stages and in advanced stages the symptoms are vague and can be neglected by women. It is essential to understand the perceptions of women towards cancer cervix and impart knowledge regarding the same.

Materials and Method: A cross-sectional study was carried out among the women attendees of urban and rural health training centers. Women who consented were interviewed in details to understand their knowledge and attitude regarding reproductive tract infections, cancer cervix screening and prevention. Interview of women was conducted and details regarding socio-demographic characters were collected alongwith knowledge and attitude regarding reproductive tract infections and cancer cervix. Health education was imparted to all women regarding importance of screening (PAP smear) and prevention of cancer cervix.

Results: Majority women in both areas had inadequate knowledge regarding cancer cervix and reproductive tract infections. White discharge per vagina was the most common reproductive tract infection reported, 38% in urban and 36% in rural area. Majority women in both areas had not heard about cancer cervix. 20% women in urban area were aware of the availability of treatment for cancer cervix compared to only 2% in rural area. Drugs and surgery were the main treatment options according to them. Only 14% women in urban and 2% women in rural area were aware that cancer cervix was preventable.

Conclusion: Knowledge regarding cancer cervix was inadequate among our study subjects. Providing health education and reinforcing importance of self-care proved beneficial as their attitude towards screening was positive.

Keywords: Cancer cervix, Pap smear test, Knowledge, Attitude.

Introduction

Cancer cervix is the one of the most malignant neoplasms of the female reproductive tract. This cancer strikes women at a relatively young age and many of them die early while they are still contributing to the workforce and raising children. In the initial stages, cancer cervix is asymptomatic but in advanced stages it may present as persistent pelvic pain, unexplained weight loss, bleeding between periods, unusual vaginal discharge, bleeding, and pain after sexual intercourse.[1]

According to the International Agency for Research on Cancer (IARC), India has the highest number of cervical cancer cases in the world. There are an estimated 132,000 new cases and 74,000 deaths each year which occur due to cervical cancer in India.[2] India accounts for about 20% of cervical cancer cases reported from the world.[3]

Infection with human papilloma virus (HPV) transmitted sexually is fundamental to the development of cancer cervix. About 7.9% of women in the general population are estimated to harbour cervical HPV infection at a given time.[4] Of the 100 HPV types, infection with types 16 and 18 cause 75% of cervical cancer globally.[5] Pap smear testing is a non-invasive screening procedure available to detect cancer cervix at an early stage. WHO recommends all sexually active women to undergo Pap testing yearly. In spite of wide availability of PAP smear test, awareness among the general public is poor. Results from various studies show the proportion of women who undergo Pap smear testing ranges from 68% to 84% in developed countries as compared to India where the rates range from 2.6% to 6.9% among women in communities.[6,7]

Owing to India's rapidly expanding population, the overall burden of incidence and mortality of cervical cancer in India is projected to increase by 68 and 78%, respectively, by the year 2030.[8] Vaccines have been introduced to combat this increased incidence and mortality. Bivalent vaccine that protects the individual against HPV strains 16 and 18, quadrivalent vaccine that protects the individual against HPV strains 16, 18, 6 and 11 are already available.[9] Awareness regarding prevention and detection of cancer cervix is very poor among people. We therefore need to strive to reach out to both general public and health professionals to deal with cancer cervix. Keeping this intension in mind we set out to assess the knowledge and attitude of women towards cancer cervix. The objective of our study was to assess the knowledge regarding carcinoma cervix among women who are/were sexually active attending out-patient clinic of health centers of a tertiary care teaching hospital and to create awareness regarding detection and prevention cancer cervix.

Materials and Methods

A cross-sectional study was conducted in the urban and rural field practice areas under the Department of Community Medicine of a tertiary care teaching hospital. The patients visiting the urban health training center are mainly from urban slums while rural center

receives patients mainly from nearby rural villages. As a part of world cancer day awareness program, we had decided to interview 100 women in each center so as understand their knowledge and attitude towards cancer cervix. A total of 200 women aged between 18years and 65years were selected randomly from those who visited the out-patient clinics of both health training centers irrespective of reason for visit. Women were informed about the objectives of the study and confidentiality was assured. Women who consented for the study were interviewed using a semi-structured schedule during month of November, 2016. They were enquired regarding socio-demographic characteristics, knowledge of reproductive tract infections and cancer cervix and attitude towards cancer cervix.

Inclusion criteria included women who are/were sexually active, aged 18-65years who consented for the study. Women who are alredy diagnosed with cancer cervix were excluded from the study. Institutional ethical clearance was obtained. All women who attended the out-patient clinics irrespective of participation in the study were later educated and counseled regarding cancer cervix and its preventive measures. A hand-out was also provided to these women in the local language of their preference.

Adequate knowledge: Women who had heard of cervical cancer and its screening test and knew the ways/tests for detecting and preventing cancer cervix.[10]

Inadequate knowledge: Women who had never heard of the cancer cervix and its screening tests, or who had heard of it, but were not aware of screening methods aimed to detect cancer cervix.[10]

Sample Size: A study conducted in among women who visited the hospital to seek health care reported that 84% were not aware of cervical cancer.[11] This was used for sample size calculation as the study setting and population profiles matched with ours. Using the formula for infinite population $N = Z^2 \, pq/d^2$, for 95% confidence interval and a relative error of 10% we got a sample size of 74. Accounting for 10% nonresponse the total sample size was 83. We rounded it off and took 100 samples in each health training center.

Statistical analysis: Data entry was done using Microsoft Excel 2013 and analysis was done using SPSS v22.0. The analysis was done separately for UHTC and RHTC participants and later compared. Descriptive statistics like percentages, frequencies, mean and standard deviation were used. Chi-square test was applied for comparison of data. *P* value ≤ 0.05 was considered statistically significant.

Results

A total of 200 participants were included in the study, 100 each from urban health training center and rural health training center. The socio demographic characteristics of the participants are mentioned in Table 1. Age of the participants ranged between 18-65years in UHTC with a mean age of 35.8 ± 13.9 years and 18-65 years in RHTC with a mean age of 34.3 ± 11.7 years. In urban area 34% were educated till high school while in rural area 50% were illiterate. In both areas, majority were Hindu and housewives. 60% of urban women were Class III socioeconomic status while 72% were Class V in rural areas.

Table 1: Socio demographic characteristics of study participants

Characteristic		Urban (n = 100)	Rural (n = 100)
Age	18-30 years	40%	48%
	31-45 years	34%	32%
	46-60 years	14%	16%
	>60 years	12%	4%
Religion	Hindu	58%	76%
	Muslim	42%	24%
Education	Illiterate	16%	50%
	Primary	10%	8%
	Middle	6%	8%
	High school	34%	24%
	PUC	20%	6%
	Graduate	10%	4%
	Post graduate	4%	0
Occupation	House wife	84%	74%
	Farmer	4%	24%
	Service	6%	2%
	Business	4%	0
	Others	2%	0
Socio economic status	Class I	2%	0
	Class II	4%	0
	Class III	60%	6%
	Class IV	30%	22%
	Class V	4%	72%

Obstetric History and Reproductive Tract Infection: 12% women in urban area were nulliparous compared to 8% women rural area. 66% women in urban area and 84% women in rural area were multiparous. 8% women in both areas were grand multiparous. Abortion was more prevalent among urban women with 14% women having undergone abortion at least once compared to only 2% in rural area.

Normal menstrual bleeding was reported by majority women in both areas. Abnormal uterine bleeding (AUB) was reported by 12% women in urban area and 6% women in rural area. Majority women in both areas (44% in urban and 38% in rural) were not aware of any cause for abnormal uterine bleeding. Among 62% rural women who were aware of the cause, 22% stated bad blood, 12% weakness, 10% poor hygiene, 8% divine intervention and 2% hormonal.

White discharge per vagina was the most common reproductive tract infection reported, 38% in urban and 36% in rural area. Itching and skin lesions in the groin region was reported by 16% urban women and 22% rural women. Majority women (98%) in urban area were willing to consult a doctor if they had any

reproductive tract infection while in rural area it was 86% women. The reasons for not consulting a doctor were divine intervention (8%) and infection subsides by itself (6%).

Cancer Cervix: Majority women in both areas had not heard about cancer cervix, 80% in urban and 96% in rural area. Doctor was the main sources of information in both areas (12% in urban and 2% in rural) followed by media (4% urban and 1% rural) and health worker. Infection was considered the main cause for cancer cervix in urban area while in rural area it was improper hygiene. Infection is a general response given by women for cause of any illness. When asked about route of acquiring infection or risk factors they were unable to answer.

6% women in urban area attributed abnormal uterine bleeding as a symptom of cancer. Majority women in both areas were unaware of the age group affected by cancer cervix. Cervical smear is the test to detect cancer cervix according to 10% women in urban area while 2% women in rural area quoted blood test.

20% women in urban area were aware of the availability of treatment for cancer cervix compared to only 2% in rural area. Drugs and surgery were the main treatment option according to the women. 12% women in urban and 2% women in rural area opined that cancer cervix was completely curable. Only 14% women in urban and 2% women in rural area were aware that cancer cervix was preventable. But majority women in both areas were unable to express any correct preventive strategy nor had they heard about PAP smear (94% in urban and 100% in rural). Unfortunately, none of the women had undergone PAP smear test. On explaining the advantages of PAP smear test, 60% women in urban and 25% women in rural area were willing to undergo the test. Willingness to undergo PAP smear was significantly associated with occupation of the women in both rural and urban areas but with socioeconomic status it was significantly associated only in rural area. No significant results were seen while comparing educated women with attitude towards screening.

Table 2: Knowledge of study participants about reproductive tract infection

Knowledge Questions		Urban (n = 100)	Rural (n = 100)
What symptoms of reproductive tract problems you have	None	32%	27%
	White discharge	38%	36%
	Itching and skin lesions	16%	22%
	Urinary symptoms	10%	15%
What do you think is the cause for white discharge per vagina?	Don't know	43%	48%
	Weakness/ other health problems	19%	15%
	Bad blood	5%	13%
	Poor hygiene	26%	17%
	Divine intervention	2%	4%
	Others	9%	3%
Do you consult a doctor in case of RTI's?	Yes	98%	86%
	No	2%	14%
If no, why?	Corrects itself	1%	6%
	Divine intervention	1%	8%

Table 3: Knowledge of study participants about cancer cervix

Knowledge Questions		Urban (n = 100)	Rural (n = 100)
What are the causes of cancer cervix?	Infection	6%	0
	Early marriage	4%	0
	Multiple partners	5%	0
	Improper hygiene	5%	4%
Symptoms of ca cervix?	AUB	6%	0
	Blood stained white discharge	4%	2%
	AUB and Blood stained white discharge	4%	0
	Don't know	6%	2%

Which age group is affected?	Post-menopausal	4%	0
	Reproductive age group	6%	0
	Don't know	10%	2%
How can ca cervix be detected?	Blood test	2%	2%
	Urine test	2%	0
	Scanning	4%	0
	Cervical smear	10%	0
	Don't know	2%	2%
Treatment for ca cervix?	Drugs	6%	2%
	Surgery	6%	0
	Radiation	4%	0
Is ca cervix preventable?	Yes	14%	2%
	No	86%	98%
Have you heard of pap smear?	Yes	6%	0
	No	94%	100%
Are you willing to undergo pap smear test?	Yes	60%	25%
	No	40%	75%

Table 4: Association between demographic characters and attitude towards screening of cancer cervix

Demographic Characters		Willingness to Undergo PAP Test		p-Value*
		Yes	No	
Urban (n=100)				
Occupation	Non-earning	56	28	0.001
	Earning	04	12	
Socio-economic status	Upper & Middle class	40	26	0.86
	Lower class	20	14	
Rural (n=100)				
Occupation	Non - Earning	23	51	0.017
	Earning	02	24	
Socio-economic status	Middle class	04	02	0.015
	Lower class	21	73	

*Chi-square test

Discussion

Our study shows suboptimal level of knowledge regarding cancer cervix with only 6% women in urban area having adequate knowledge based on our criteria. Such poor level of knowledge was reported by other studies.[10,12]

In keeping with similar other studies done in India, perception about causative factors for cancer cervix included genital infection, poor hygiene, multiple sexual partners and early marriage.[13,14,15]

Abnormal uterine bleeding was the commonly mentioned symptom among study participants. Multiple studies have similar findings.[12,16,18]

10% women in our study quoted cervical smear as the main test to detect cancer cervix. Only 6% women had heard about PAP smear. This shows that women were unable to recollect the exact name of the test but remembered that a smear would be taken from cervical region. Such poor knowledge about PAP was also reported by other studies.[10,13]

14% women in urban area and 2% women in rural area were aware that cancer cervix can be prevented. Similar results were seen in studies in North India.[13,14]

Doctor was main the main source of information in our study unlike other studies where television advertisements, magazines and family members were the sources of information.[10,18]

Some women were not willing to consult a doctor in case of any reproductive tract infection/symptoms as they believed in divine intervention. It is important to correct such false perceptions about cervical cancer.

Health education sessions were carried in the health centers and women were informed about causative factors, signs and symptoms and necessity of screening. Post health education, attitude for screening was more favourable with 60% women in urban and 25% women in rural area agreeing to undergo PAP smear test. This suggests that accurate information about cervical cancer causes and prevention needs to be available to women so that they can take informed decision. Inspite of health education some women were unwilling to undergo PAP, the main barrier for these

women was absence of illness/symptoms, shyness, permission from husbands and other family members, fear of diagnosis of cancer.

Willingness to undergo PAP after receiving health education was significantly associated with occupation and socioeconomic status. This shows that women who were financially more stable were more willing to take decision regarding PAP without feeling the need to consult their husbands or other family members. Hence women empowerment and education is of utmost importance in improving their health.

Our study was based on questionnaires therefore one of the main limitation was response bias. Due to feasibility reasons this study could not be conducted in the community and was restricted to women attending the OPDs. It is possible that some women were educated and advised about cervical cancer and its screening, but there might have been recall bias. Some women might have been hesitant while answering the question which could lead to bias in results.

Based on the findings of our study we recommend that health awareness among women especially marginalized women should be increased. In our study, inspite of attaining some level schooling, awareness was poor. It is essential to include health education as a part of school education curriculum. Repeated lectures or other awareness programs should be conducted to inculcate the importance of health in the young minds. Various health check-up and screening camps should be conducted in the community so as to create awareness among general public. Money is a constraint for many women therefore, steps should be taken to make screening tests affordable and available to all.

Conclusion

Knowledge regarding cancer cervix was inadequate among our study subjects. Complete lack of knowledge and misconceptions regarding causation, treatment and prevention of cancer cervix is prevalent among our study subjects. But after obtaining health education their attitude towards screening was positive. Providing health education and reinforcing importance of self-care proved beneficial. It is through repeated mass campaigns and screening camps that we health professionals will succeed in dispelling the false traditional beliefs about cancer cervix. Increasing such awareness among the beneficiaries will be critical to the success any public health initiatives.

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