

AWARENESS AND PRACTICE REGARDING CERVICAL CANCER PREVENTION AMONG FEMALE COLLEGE STUDENTS OF MANGALORE CITY, INDIA

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ABSTRACT

Objective: The aim was to determine the awareness and practice of female college students in Mangalore in relation to cervical cancer.

Methods: A cross-sectional study was carried out among 270 female students from various pre-university and degree colleges in Mangalore. A semi-structured, self-administered questionnaire was used to collect data. Convenient sampling was done. Data were entered and analyzed using SPSS v. 11. Ethical approval was obtained from the Institutional Ethics Committee of Kasturba Medical College, Mangalore.

Results: Very few of the participants 43 (16.5%) were aware that cervical cancer is the most common gynecological cancers in India. Awareness levels regarding various risk factors were as follows: Poor genital hygiene (n=154, 59.2%), multiple sex partners (n=85, 32.7%), multiple pregnancies (n=54, 20.8%) and early initiation of sexual activities (n=52, 20.0%). Regarding the preventive measures of cervical cancer, 21 (8.1%) of the study participants had heard about the Papanicolaou test, whereas none of the participants had undergone the test. Forty-five (17.3%) of the students mentioned that they were aware of the presence of a vaccine.

Conclusion: Majority of our study group were unaware of the various risk factors of cervical cancer and its preventable nature. Awareness regarding the association between diets, multiple pregnancies was also poor. Awareness generation through campaigns and other modes are the need of an hour to check the rapidly increasing incidence of cervix cancer.

Keywords: Cross-sectional studies, Female, Risk factors, Cervical cancer.

INTRODUCTION

Cervical cancer is one of the leading causes of morbidity and mortality amongst the gynecological cancers worldwide [1]. In today's world, cervical cancer is primarily a disease found in low income countries [2]. Of the nearly 500,000 new cases that occur annually, 83% are in the developing world, as are 85% of the 274,000 deaths associated with cervical cancer [3]. The South Asian region harbors one fourth of the burden of cervical cancer. In India alone there are an estimated 132,000 new cases and 74,000 deaths each year [4]. Most women with cervical cancer in these countries present with advanced disease, resulting in low cure rates [4]. Several factors contribute to the high burden of disease and advanced stage at presentation including poor knowledge about the disease furthermore there is a lack of screening among the general population. Cervical cancer is an infection-related cancer caused primarily by the human papilloma virus (HPV). There are more than 100 different types of HPV. Approximately, 60 HPV types cause warts on non-genital skin, such as on the hands, arms, knees, shins, feet, and face. Approximately, 40 HPV types can affect mucous membranes and cause genital warts or low-grade changes, high grade changes, pre-cancer or cancer in the cervix, vagina, anus, vulva, penis, urethra, mouth, throat, tongue or tonsils; in addition, there are other HPV types that do not cause warts, cancer or symptoms [5]. Refraining from all sexual contact involving the genitals is the only absolute way to prevent genital infection by the HPV (American Cancer Society, 2009; Centers for Disease Control, 2007a; Centers for Disease Control, 2007b; National Cancer Institute, 2004). Given that complete abstinence is not a desirable or realistic expectation for most adults, other means of reducing risk of acquiring the HPV are recommended. Limiting intimate sexual activity to one, mutually monogamous, uninfected partner will reduce a person's risk of contracting a genital type of the HPV. Limiting

the number of sexual partners will, likewise, reduce a person's risk of contracting different strains of the HPV. Avoiding direct contact with the HPV, which is primarily transmitted by skin-to-skin contact, is deemed to be an effective means of reducing the risk of HPV transmission. Latex condoms have been identified as an effective means for reducing risk of transmitting several sexually transmitted diseases. Consistent and correct use of latex condoms provides some protection against the HPV. However, given that condoms do not cover the vulva, scrotum, perineum, or rectal areas, condoms cannot completely prevent transmission of genital types of the HPV [5]. The epidemic of cervical cancer can be reduced with the proper awareness and practice of cervical cancer prevention measures. Hence, this study would like to determine the awareness and practice of cervical cancer prevention measures among female college students of Mangalore city, India.

METHODS

A cross-sectional study was conducted among female students studying in various pre-university and degree colleges in Mangalore, Karnataka. A sample size of 270 was calculated considering a power of 80%, confidence level of 95% and an absolute error of 5% and the awareness of adult females in relation to cervical cancer to be 20% [6], the sample size came to be 243. Considering a non-response rate of 10%, the final sample size came out to 267, which were rounded off to 270. Convenient sampling was done to recruit participants into the study. The information regarding the awareness and practice of cervical carcinoma prevention was collected using a semi-structured questionnaire. The questionnaire consisted of three parts, viz., the first part consisted of questions in relation to the socio-demographic information of the participants, the second part in relation to awareness regarding cervical cancer in terms of its risk factors, causes

and prevention and practices in relation to prevention of cervical cancer and third part contained questions in relation to the source of information regarding the cervical cancer related aspects. The questionnaire was pre-tested among a small group of students, and necessary modifications were made in terms of comprehensibility and content of the questionnaire. The data were entered in MS Excel and analyzed using SPSS (version 11.0) computer software. The descriptive statistics was done in terms of means of percentages. A Chi-square test was done to assess the association between variables and interest. Prior to the onset of the study approval was obtained from the Institutional Ethics Committee of KMC, Mangalore. A written informed consent was obtained from the participants, and all the collected information was kept confidential.

RESULTS

Among the 270 female college students, we approached 260 filled the questionnaire completely. The response rate came out to be 96.3%. Among our study participants, 215 (82.7%) of the females were of the age of 17-20 years. Majority 190 (73.1%) were from commerce stream, followed by arts stream 37 (14.2%) and 30 (11.5%) were from science stream (Table 1).

Among the study participants, 43 (16.5%) were aware that cervical cancer was the most common cancer among women in India. More than 3/4th of them (n=205, 78.8%) mentioned that breast cancer as the most common cancer among women in India. Regarding the various risk factors associated with cervical cancer, the awareness of our study participants was as follows: poor genital hygiene (n=154, 59.2%), multiple sex partners (n=85, 32.7%), multiple pregnancies (n=54, 20.8%) and early initiation of sexual activities (n=52, 20.0%) (Table 2).

Less than one-fourth (n=55, 21.2%) of our participants ever heard of HPV. Almost an equal proportion of the participants (n=53, 20.4%) were aware that HPV can be detected with the help of various tests. The term Papanicolaou (Pap) test was heard by 21 (8.1%) of the study participants and none of them had undergone Pap test ever. The availability of a vaccine to prevent cervical cancer was known to 45 (17.3%) of the participants and prevention of cervical cancer with consistent use of condoms was known to 26 (10%) (Table 3).

The major sources of information regarding cervical cancer were found to be television/radio (n=98, 37.7%), followed by class teachings (n=58, 22.3%) and friends (n=44, 16.9%). When asked whether it is necessary for them to have more information in relation to cervical cancer, all of them (n=260, 100%) responded affirmatively. The preferred mode of knowledge transfer were found to be through awareness campaigns (n=96, 36.9%), Mass media (n=90, 34.6%) and inclusion into the existing curriculum (n=52, 20.0%).

DISCUSSION

The present study was conducted to determine the awareness and practice of female college students in Mangalore in relation to cervical cancer. Out of the 260 participating female college students in our study only 16.5% of the students knew that cervical cancer is the most prevalent type of cancer among Indian women. In a study conducted in Kolkata [6] among female students of colleges, 20% correctly mentioned cervical cancer as the most prevalent cancer in India.

In another study [7] conducted in Pakistan, 1.8% participants did not know cervical cancer as a disease and only 23.3% of the respondents were aware that cervical cancer is the most common cause of gynecological cancers.

In our study, we also inquired about the risk factors of cervical cancer, knowledge was least for micro-organism (13.8%) as a causative agent, followed by early onset of sexual activity (20%). The largest proportion (59.2%) of the students recognized that poor genital hygiene can be a risk factor for cervical cancer, followed by (58.5) of the students

correctly identified "tobacco in any form" as a risk factor compared with their correct responses for the other risk factors evaluated.

In a study done in Kolkata [6], 41% of the participants thought sexual activity to be associated with cervical cancer, its risk factors, like, "smoking," "having multiple sex partners," "cervical infections," "early onset of sexual intercourse," "multiple parity" were recognized by 29%, 3%, 4%, 13% and 15%, respectively.

Table 1: Socio-demographic details of the participants (N=260)

S.No	Attribute	N (%)
1	Age	
	<20 years	215 (82.7)
	>20 years	45 (17.3)
2	Educational stream	
	Commerce	190 (73.1)
	Arts	37 (14.2)
	Science	30 (11.5)
	Others	3 (01.2)
3	Marital status	
	Unmarried	251 (96.5)
	Married	9 (03.5)
4	Place of residence	
	Urban	221 (85.0)
	Rural	39 (15.0)

Table 2: Awareness of participants in relation to cervical cancer (n=260)

S.No	Attribute	N (%)
1	Most common cancer among women	
	Breast	205 (78.8)
	Cervical	43 (16.5)
	Lung	10 (3.8)
	Oral	2 (0.8)
2	Risk factors of cervical cancer	
	Poor genital hygiene	154 (59.2)
	Multiple sex partners	85 (32.7)
	Multiple pregnancies	54 (20.8)
	Early initiation of sexual activities	52 (20.0)
	Cause of cervical cancer is a microorganism	36 (13.8)
	Heard of HPV	55 (21.2)
	Can HPV be detected	53 (20.4)
Smoking	152 (58.5)	
3	Prevention of cervical cancer	
	Heard of Pap smear	21 (08.1)
	Undergone pap smear examination	0
	Vaccines to prevent cervical cancer	45 (17.3)
	Condoms for prevention cervical cancer	26 (10.0)

HPV: Human papilloma virus, Pap: Papanicolaou

Table 3: Source of knowledge and need for training in relation to cervical cancer (n=260)

S.No	Attribute	N (%)
1	Source of knowledge	
	Television/Radio	98 (37.7)
	Class teachings	58 (22.3)
	Friends	44 (16.9)
	Journals	32 (12.3)
	Internet	19 (07.3)
	Others	9 (3.5)
2	Mode of knowledge transfer preferred by participants	
	Awareness campaigns	96 (36.9)
	Through mass media	90 (34.6)
	Through curriculum inclusion	52 (20.0)
	Training activities	19 (7.3)
	Others	3 (1.2)

Among the participants of our study, 20.4% of the students heard of HPV while only 8.1% knew about Pap smear, but none of them had undergone Pap smear test. In our study, 17.3% of the participants were aware about the vaccine for cervical cancer and only 10% knew that condoms can prevent the occurrence of cervical cancer.

While in a study done in Kolkata [6], the terms "Pap test" and HPV had been heard by 11% and 15% of the students, respectively, and 75% of the students desired to have protective vaccination.

In the study done in Pakistan [7] among interns and nursing staffs in tertiary care hospitals, 37% recognized Pap smear as a screening test and only 9.2% of the respondents were aware of the HPV vaccine.

The strengths of our study include adequate sample size and high response rate among the participants. However, there are few limitations in terms of the study being conducted in only few colleges in the city and hence generalization to other settings may not be possible and also the age groups were very narrow and the study included few married subjects.

CONCLUSION

The knowledge and practice regarding cervical cancer prevention were low among our study participants. There is a need to develop a formal policy in this regard in our country and to develop mechanisms to generate widespread awareness about cervical cancer through various means, such as mass media, awareness campaigns and IEC activities. Further research in this regard is a need of the hour for prevention and control of cervical cancer in our country.

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