



Awareness Of Medical Students About Carcinoma Of Cervix, Human Papilloma Virus And HPV Vaccine. A Cross Sectional Study

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Abstract

Background-

Cervical cancer is the fourth most frequently occurring cancer of women in India. It represents 7.5 % of all female cancer deaths. Cervical cancer is caused by human papilloma virus mostly. In 70 to 80% cases HPV 16 & 18 are the causative agents.

Material and Method-

A self administered, semistructured, pretested questionnaire was designed for the study was distributed among the 2nd year medical students. Total 100 students participated in the study.

Results-

71 female and 29 male participated in the study. Fifty-nine students were aware about the viral aetiology of the carcinoma cervix. Sixty one percent knew that sexual route is the mode of transmission of the disease. 56% students opined that multiple sexual partners is the risk factor for development of carcinoma cervix. 66% knew that PAP smear is the screening method for carcinoma cervix. HPV vaccine as the preventable nature of carcinoma cervix among study participants was 37%. Sixty four percent know the availability of vaccine in India.

Conclusion-

There is still lack of knowledge about carcinoma cervix, HPV and HPV vaccine in medical students. More integrated teaching programmes regarding Carcinoma cervix, HPV and HPV vaccination needs to be introduced to medical students and general public.

Keywords: Cervical carcinoma, Human Papilloma Virus, HPV Vaccine, PAP smear

Introduction

Cervical carcinoma(CC) is the fourth most frequently occurring cancer affecting women worldwide after breast, colorectal and lung cancer.(1) It is the 8th most common cancer worldwide. Approximately, 80% of the global burden of this cancer and 90% of CC deaths occur in low & middle income countries(1). India has a population of 436.76 million women, aged 15 years and older, who are at risk of

developing CC, of which annually 1,22,844 women are diagnosed with CC and 67,477 die due to this [2, 3]. CC is caused by HPV mostly. HPV16 and HPV18 cause cervical carcinoma of 70 to 80 % of all cases.

Based on Indian studies, about 82.7% of invasive CCs have shown the presence of HPV16 or 18 [2]. CC can be prevented by early diagnosis, screening

and various treatment measures[2] Screening of CC is based on the assumption that early detection may allow early treatment. It is a well-known fact that cytology-based screening programs have resulted in dramatic reduction in the incidence and mortality of invasive cervical cancer in different countries of the world.(3)The high burden of cervical cancer in developing countries is largely due to lack of effective screening programs. It is important to know the overall scenario of epithelial cell abnormality especially in developing countries like India. Regular cervical cytological examination by sexually active women can prevent the occurrence of carcinoma cervix[4]. Knowledge & awareness about Carcinoma cervix, HPV and its vaccine is very important for the prevention of health hazards caused by HPVs.

Objective:

To evaluate the knowledge and awareness of second year medical students about Carcinoma cervix, its cause and HPV vaccine .

Methodology:

Study design: The study was a cross sectional study.

Study setting: The study was conducted in a tertiary care medical institute and hospital.

Study period: Data was collected over 2 month's period between August 2022 to September 2022.

Study subjects: The second year undergraduate medical students were included in the study

The present study was conducted at NKP Salve Institute of Medical Sciences and Research Centre for a period of 2 months. After approval of Institutional Ethical Committee, the study was conducted among second year undergraduate medical students regarding awareness and knowledge on various aspects of CC, HPV and HPV vaccine. A self-administered, semi structured, pretested questionnaire designed for the study was distributed among the students.Total 100 students participated in the study.

Results:

The mean age of the students who participated in the study was 21 years. 100 medical students, consisting of 71 female and 29 male, participated in the study. Knowledge regarding etiology of cervical cancer, 59 students were aware that a virus i.e HPV is the cause of CC. Regarding mode of transmission 61% students

knew that it is transmitted by sexual route. Regarding the risk factors, 56% students opined that multiple sexual partners are the risk factors for development of CC and only 38 % said that it is by long term hormonal contraceptives and 6 % students opined that early sexual intercourse is one of the risk factors. 66% of students knew that PAP smear is the screening method of CC.Others were not aware of PAP smear. Regarding preventive methods 37 students said that vaccine is the preventive method, 26% opined about the barrier methods for contraception.(Table-1) About availability of vaccine in India 64 students knew that HPV vaccine is available in India. 2% don't know about availability of vaccine and 34% said that HPV vaccine is not available in India. (Table-2)

In the present study, most of the participants were well aware of the viral etiology of carcinoma-cervix. Similar findings were observed in other studies conducted at different places. The awareness about preventable nature of carcinoma cervix through a vaccine among study participants was 37%. Sixty-four percent of students knew the viral etiology of carcinoma cervix. Our students have poor knowledge about Carcinoma cervix that it is a preventable cancer with vaccine.Majority of the students knew that sexual transmission is the common mode of transmission of the virus.

Discussion-

Majority of the 2nd year medical students in this study were aware of the viral aetiology of carcinoma cervix. The awareness was more in the study participants as observed by Challa et al[6], Tripathy et al[7] and Mehta et al[8].

In our study, 61% of students knew that sexual transmission is the common mode of viral transmission. In other studies variable percentage is there. In the study by Tripathy et al, majority (91.8%) students knew the mode of transmission of virus. Similar findings were observed in the study by Challa et al.[6], & Seshaiyengar et al[9]. However in the studies by Tripathy et al[10]& Mehta et al[8] correct responses to the mode of transmission was only 25% and 38% respectively, which was less compared to our study. Sixty six percent of students knew that screening of cervical cancer can be done by PAP smear test. Only 37% of medical students were aware of prevention of cervical cancer by vaccination. In

the study by Snigdha et al [11] similar findings were seen regarding prevention of cervical cancer by vaccination. In our study, 75% students replied that screening for Cervical cancer was necessary before vaccination. Similar findings were seen in the study conducted by Kumar et al where responses were 60%. A study by Swarnapriya et al [13] concluded that the knowledge regarding HPV vaccination among medical and paramedical students is poor. The nursing students displayed better knowledge compared to MBBS and dental students. The HPV vaccine uptake is also very poor among medical and paramedical students. Kamini et al [14] reported that about half of the students were aware of HPV vaccination. Hence, a still lower level of awareness may be expected among the lay public. This clearly demonstrates the gap in knowledge. Overcoming this gap is necessary if we want to decrease the burden of cervical cancer in India. The information must be included early in the medical education curriculum and reinforced thereafter. It is necessary to implement health education programs, group discussions and forums where aspects of HPV infection, its association with cervical cancer, and the HPV vaccine are clearly highlighted and doubts clarified. In the study by Kumari et al [15] noted that there was a positive correlation between the duration of marriage and practice. Similar findings were noted by Shrestha [16] in a study done in Kathmandu. Longer duration of marriage would probably expose women more to health centers for various other reasons. So, they would be more aware of their health status and hence their level of knowledge and practice. This could also be the reason why the practice was better with higher parity index. Similar findings were noted by Shrestha et al [16], though the results in that study were not statistically significant. In this study lack of knowledge about PAP smear tests played a significant role in poor uptake of PAP smear by women.

Our study suggests that overall awareness and knowledge about CC, HPV and HPV vaccine was moderate among medical students. The study showed that the students were fairly aware of CC but had poor knowledge about prevention technique. To assess the knowledge of CC, HPV and HPV Vaccine more questionnaire should be conducted targeting not only medical students but health care workers. Lack of knowledge of HPV and HPV vaccination suggests

that a more integrated teaching approach regarding the same is crucial to the medical students who will be the frontline support to the patients.

Conclusion-

There is still lack of knowledge about carcinoma cervix, HPV and HPV vaccine in medical students. More integrated teaching programmes regarding Carcinoma cervix, HPV and HPV vaccination needs to be introduced to medical students and general public.

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Table-1 Knowledge of study population about carcinoma cervix (n=100)

Questions	Responses	Frequency %
Etiology of Carcinoma Cervix	Bacteria	12
	Virus	59
	Fungus	03
	Don't know	26
Transmission of HPV is by	Sexual contact	61
	Blood borne	13
	Injection	1
	Don't know	25
Risk factors for developing CC	Long term hormonalcontraceptives	38
	Early sexual intercourse	06
	Multiple sexual partners	56
Screening tests for CC	PAP Smear	66
	Blood	05

	PCR	02
	Don't know	27
Preventive Methods against CC	Sexual relationship with single partner	13
	Personal hygiene	24
	Vaccine	37
	Barrier methodsfor contraception	26
Can cervical cancer be detected in early Stage	Yes	72
	No	09
	Don't know	19

Table 2. Knowledge of study population regarding HPV vaccine [n=100]

Questions	Yes		No	Don't know
Can vaccine be given to a person infected with HPV	63		37	-
Is screening required before vaccination	75		25	
Who should be vaccinated	Boys- 01		Girls- 90	09
Are vaccines available in India	64		34	02
At what age vaccine should be given	0-9 yrs 9	10-30 yrs 80	31-50 yrs 10	Above 50 yrs 01