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"KNOWLEDGE AWARENESS AND PRACTICE TOWARDS HUMAN PAPILLOMA VIRUS VACCINATION AMONG MEDICAL STUDENTS AT VIMS, BALLARI"

Obstetrics & Gynaecology

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ABSTRACT

Objectives: To assess the knowledge among medical students about HPV virus infection, HPV vaccination, the awareness about availability and attitude towards getting vaccinated and the vaccination status of the students. **Method:** A prospective observational study to assess the knowledge, awareness and attitude and practice towards regarding HPV vaccination among medical students was conducted in Department of OBG, VIMS, Ballari from August 2023 to December 2023. **Result:** A total of 250 medical students participated in the study. The ages ranged from 19-22 years, most of them were 20(38.7%) and 21 (36.7%) years old. Among them, 3rd year MBBS student accounted 123 (49.2%) and 127(50.8%) for and final year MBBS students. In them, 46.7% were males and 53.3% were females. In this study we found that final year students had better aware of Human Papilloma Virus than was found to be statistically significant with p-value <0.001, in comparison to 3rd year students. Regarding attitude towards vaccination 72% of participants in our study were willing to take HPV vaccine.

KEYWORDS

Human Papilloma Virus Vaccination, Knowledge, Awareness and Practice among medical students.

INTRODUCTION

Human Papillomavirus (HPV) is the most common sexually transmitted infection, affecting almost every unvaccinated adult over the course of their life.1

Infection with human papillomavirus (HPV) is recognized as one of the major causes of infection- related cancer worldwide, as well as the causal factor in other diseases. The International Agency for Research on Cancer has established strong evidence for the causal etiology of HPV and cancers of thecervix uteri, penis, vulva, vagina, anus and oropharynx.2. As for the burden of this disease HPV being the causative agent of cervical cancer which is the fourth most common cancer in women in the world ,the second most common cancer accounting for 6-29% of cancers among women in India and responsible for 60,078 deaths annually ranking as the 2nd leading cause of female cancer related deaths in India [1] Prophylactic HPV vaccination has provided a powerful tool for primary prevention of cervical cancer and other HPV-related diseases.2

At any given time, about 6.6% of women in the general population are estimated to harbor cervical HPV infection. HPV serotypes 16 and 18 account for nearly 76.7% of cervical cancer in India. Warts have been reported in 2–25% of sexually transmitted disease clinic attendees in India; however, there is no data on the burden of anogenital warts in the general community.4

The Advisory Committee on Immunization Practices (ACIP) recommends that adolescents who initiate at or after 15 years of age require three doses, with "catch-up vaccination" recommended through 26 years of age, immunocompetent adolescents initiate a two-dose series of HPV vaccination at ages 11 or 12 years1

HPV vaccines were originally licensed on the basis of their demonstrated clinical efficacy in preventing cervical precancer lesions in young adult women, and genital warts and anal neoplasia in men. The HPV vaccine is a newer addition in the universal immunization schedule; hence its awareness is less compared to other vaccines Increasing knowledge of the risks associated with HPV infection and the safety and efficacy of the HPV vaccine are important first steps to build confidence in vaccination and increase uptake among adolescents6. Knowledge about availability of vaccination for the disease including adequate participation in immunization programs can lead to successful reduction in disease burden and control of cervical cancer in community. Thus, the study aimed at assessing the extent of knowledge, awareness and attitude towards HPV among medical students.

The objectives of this study: To assess the knowledge among medical students about HPV virus infection, HPV vaccination, the awareness about availability and attitude towards getting vaccinated and the vaccination status of the students.

MATERIAL AND METHOD

A prospective observational study was carried out at Department of OBG, VIMS, Ballari from August 2023 to December 2023.A sample of 250 students consisting of students of 3rd and final year MBB were explained about the nature of the study and after taking written informed consent and a questionnaire administered which consisted of 25 Questions and divide into 3 parts, part 1 Knowledge regarding HPV infection and vaccination it will be multiple choice type which, the participants were asked to choose single answer, part 2 Awareness about HPV and related infection and vaccination. Questions on awareness of availability of vaccine, and part 3, practice of HPV vaccination was assessed based on prior vaccine status and willingness to get vaccinated and to recommend the vaccine to a friends and families. Percentages based on right answers are calculated and compared for each question separately and the responses are statistical analyzed.

Statistical analysis:

Data was entered on excel sheet and was analyzed using IBM SPSS Version 28 for windows.

Categorical data is represented as percentage association between variables assessed with Chi Square Test and Fisher's Exact test and quantitative data w represented as Mean & Sd and P value of <0.05 is considered statistically significant.

RESULTS

A total of 250 medical students participated in the study. The ages ranged from 19-22 years, most of them were 20(38.7%) and 21 (36.7%) years old. Among them, 3rd year MBBS student accounted 123 (49.2%) and 127(50.8%) for and final year MBBS students. In them, 46.7% were males and 53.3% were females as shown in Table 1.

Table No 1: Demographic characteristic of the study participants

Demographic details		No of Students	Percentage (%)
Age	19-20	123	49.2
	21-22	127	50.8
Gender	Male	117	46.7
	Female	133	53.3
Education	3rd year	123	49.2
	Final year	127	50.8

Table No 2: Knowledge regarding HPV infection and Vaccination: Knowledge regarding HPV infection and Vaccination:

KNOWLEDGE REGARDING HPV INFECTION	CORRECT ANSWER NO (%)	WRONG ANSWER NO (%)
The route of transmission Human Papilloma virus (HPV)?	185 (74.0)	65 (26.0)

Human papilloma virus is implication in causation of various disease	172 (68.8)	78(31.2)
Risk factors for HPV infection	218 (87.2)	32 (12.8)
HPV screening test availability	145 (58.0)	105 (42)
HPV screening test	182 (72.8)	68 (27.2)
Cervical screening	168 (67.2)	82 (32.8)
Disease burden of Cervical cancer	198 (79.2)	52 (20.8)
HPV vaccine protective against which HPV strains	132 (52.8)	118 (47.2)
Age recommendation for HPV vaccination	93 (37.2)	157 (62.8)
HPV infection prevention method	223 (89.2)	27 (10.8)

Knowledge regarding HPV virus, the mode of transmission of virus was correctly answered by (74%) of the student's and knowledge about HPV as a causative agent for cervical cancer and genital warts and anogenital carcinoma was answered correctly by 172 (68.8 %) and 218 (87.2%) correctly identified the risk factor for acquiring HPV infection, knowledge Regarding HPV screening method and availability was answered correctly by 58% and 72% of students respectively. Knowledge about Cervical cancer and cervical screening methods were answered correctly by 79.8% and 67.2% of student respectively. Age recommendation for HPV vaccination was identified correctly by 37.2% students and 52.8% student Correctly identified the HPV strains that HPV vaccine renders protection.

Awareness regarding HPV infection and Vaccination:

Awareness of Cervical cancer and its attribution to HPV infection was correctly identified by 155(62%) students, HPV vaccination and its clinical efficacy in preventing cervical precancer lesion was identified correctly by 204(81.6%) students. Awareness about HPV vaccine included as universal immunization and its availability in India was identified correctly by 59(23.6%) and 217 (86.6%) students respectively.

Practice regarding HPV screening and vaccination

With respect to screening only 16.8% students had prior knowledge of screening and prior recommendation it to their friends and family

Regarding vaccination only overall 12.4% student were immunized and all were female students and the willingness to undergo immunization was similar in among female and male students which was found to be statistically significant <0.001. There was not much difference in acceptance of the HPV vaccine among the students.

Table 3: Association of demographic characteristics in acceptance of Human Papilloma Virus vaccine among the study

Students		Yes (%)	I don't know (%)	(%) p- value
Gender	Male	94(80.34	23(19.6)	<0.001
	Female	96 (94.%)	06 (5.8%)	

Table No 4: Awareness regarding HPV infection and Vaccination:

Awareness Regarding	Correct Answer	Number Of Students	
		3rd year students	Final year students
Nearly all cases of cervical cancer attributed to HPV infection	155	52 (33.5%)	103 (66.5%)
HPV vaccine as efficacy in preventing cervical precancer lesions	204	74 (36.6%)	130 (63.7)
HPV vaccine is included in universal immunization schedule	59	23 (39%)	36 (61%)
HPV screening test availability for males	108	38 (35.2%)	70 (64.8%)
HPV vaccine recommendation in both genders	146	40 (27.4%)	106 (72.6%)
HPV vaccine availability in India	217	97 (44.7%)	120 (55.3%)
HPV vaccine manufactured in India	152	58 (38.2%)	94 (61.8%)

DISCUSSION

Cervical Cancer is the 4th most cancer affecting the women and nearly all cases of cervical cancer can be attributed to HPV infection. Prophylactic HPV vaccine is an effective way to prevent HPV-related diseases, including cervical cancer. Hence knowledge about HPV, its association with Cervical cancer help reducing disease burden in the community and Thus, the current study was conducted to evaluate the overall knowledge, awareness about HPV infection and vaccination in 3rd and final year MBBS students in VIMS, Ballari

The mean age of the subjects in the present study was 20.5 years. The study results also indicated that overall knowledge regarding HPV infection and its implication in causation of cervical cancer was found to be more than 50% which was more then the study done by Das E et al [8](2018) which showed the overall knowledge was below 50%.

Regarding screening and preventive measures of cervical cancer 72.8% student had knowledge about HPV screening methods and 67.2% student about the cervical screening methods and Pap smear as screening method for cervical cancer was known by 90.1% participants in a study conducted by Maharajan et al. in Malaysia.[9] In this study 37.2% student had knowledge about Age recommendation in HPV vaccination

Awareness about HPV association in causation of cervical cancer was present in 62 % of student compared to 97.3% student in study by Gollu AN et al [6] (2020), The awareness about of vaccine to prevent HPV infection was seen in 81.1% of students when compared to 75.3% study group in the study done by Pandey et al at Manipal

Our study showed 87.2% of students knew about other risk factors for HPV infection which was similar to study by Gollu AN et al [6] (2020). Another study conducted to find out awareness about the risk factors for cervical cancer among the educated youth in India, Sri Lanka and Nepal and the average awareness in this regard was found to be 66% in India, 58.8% in Nepal and 57.7% in Sri Lanka.In this study we found that final year students had better aware of Human Papilloma Virus than was found to be statistically significant with p-value <0.001, in comparison to 3rd year students.

In the study, awareness regarding vaccination advised to men was found to be in 43.2% when compared to a study conducted by Yam et al.in Hong Kong [10] 43.2% of medical students agreed that vaccination was recommended to men.

In the present study, only 12.4 % student had received course of vaccination all being female students. In a study conducted by Berenson et al.[11] in U.S. among 231 medical students, 81 (66.4%) female students and16 (14.7%) male students reported initiating the vaccine. And in study Gollu AN et al [6] 14 (9.3%) student had received completed course of HPV vaccine Regarding attitude towards vaccination 72% of participants in our study were willing to take HPV vaccine to prevent cancer cervix. 88% of respondents of the study by Sumita et al were willing to take the vaccine.

This study showed that knowledge about cancer cervix and HPV vaccination is good among medical students. However there are certain important aspects of the disease and prevention that even they are unaware of. There is a need to include those aspects in the curriculum of medical students so that they can be effective in spreading the information and motivate eligible persons to take HPV vaccine

CONCLUSIONS

Prevention of cervical cancer through vaccination is revolutionary concept knowledge and awareness regarding HPV infection and vaccination among the medical students, the future clinicians will be able to play a pivotal role in popularizing this strategy as it helps recognition and influences their intention to recommend the vaccine and in turn affects the vaccination uptake in the community

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