



AWARENESS ON HPV VACCINE AMONG STUDENTS IN A MEDICAL COLLEGE

Obstetrics & Gynaecology

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ABSTRACT

BACKGROUND: Human papilloma virus is the major cause of cervical cancer in women and HPV vaccine is the most effective option for the same. Medical students should be aware of cervical cancer, HPV and the vaccination for prevention. This calls for assessment of the knowledge of HPV infection and the awareness of HPV vaccine among medical students.

AIM: The aim of this study was to assess awareness of HPV infection and HPV vaccine among medical students

DESIGN: It is a cross sectional study done among final year MBBS students in ASRAMS medical college and hospital.

METHODS: It is a cross-sectional study. A total of 150 (70 males and 80 females) final year M.B.B.S. students participated. Data regarding HPV and its vaccine were collected using questionnaire based survey. The questionnaire sought student responses pertaining to the knowledge of cervical cancer, HPV and the vaccination for prevention. The data were analyzed using Microsoft Access and Excel software.

RESULTS: Most of the participants knew well about the etiology and prevention of cervical cancer but information regarding the dosage, schedule, site, route of administration and HPV vaccine effect on other STDs was lacking in majority of them.

CONCLUSION: The medical students know the association between Human Papilloma Virus and cervical cancer, but the awareness about HPV vaccine was low among them. Medical schools should stress on teaching methods aimed at improving awareness regarding HPV and its vaccine.

KEYWORDS

HPV vaccine, Cervical cancer

INTRODUCTION:

Cervical cancer is the second most common cancer among women worldwide. About 500,000 women are diagnosed with cervical cancer contributing to around 270,000 deaths, across the globe every year. Out of these, the burden of 230,000 (85%) deaths is owned by developing countries, with bare minimal resources to cope with the situation [1]. In India alone there are an estimated 132,000 new cases and 74,000 deaths each year [2]. The discovery that human papillomavirus (HPV) is responsible for virtually all cervical cancers opens exciting new possibilities for controlling this disease. (3)

As preventing cancer with the help of a vaccine is very useful concept, awareness and education will have important implication in the implementation of this strategy. It is important for medical students to have awareness on causative organism and its prevention by HPV vaccine.

MATERIALS AND METHODS:

Study setting

A cross-sectional study was conducted in September 2019 to know the level of awareness about various aspects of HPV infection and vaccine by a questionnaire among final year students in ASRAMS medical college and hospital, Eluru.

Participant recruitment

A total of 150 final year medical students participated in the study, out of which 70 were males and 80 were females. The participants were assured of anonymity and confidentiality and were requested to complete a 25 point questionnaire regarding cervical malignancy, HPV infection and HPV vaccine.

The questionnaire developed for the study consisted of:

1. What is HPV?
2. What types of HPV that are high risk?
3. How do HPV present?
4. What are the other cancers caused by HPV infection?
5. What is the most common risk factor for HPV infection?
6. What is the best way to protect against HPV infection?
7. Incidence of cervical cancer?
8. Is HPV infection treatable?
9. Do barrier contraception prevent HPV infection?
10. What age is ideal for HPV vaccine?
11. Do you know the dosage & schedule of the HPV vaccine?
12. What happens if my child don't get all the doses of HPV vaccine?

13. What is the efficacy of HPV vaccine?
14. Do regular cervical screening needed after taking HPV vaccine
15. Does HPV Vaccine provide protection from other sexually transmitted diseases?
16. Does being infected with HPV mean a person will get genital wart or cancer?
17. What are the other diseases prevented by HPV vaccine?
18. What are the types of HPV vaccine?
19. Is regular cervical screening needed after taking HPV vaccine?
20. Is it cost effective to vaccinate everyone?
21. What are the side-effects of HPV vaccine?
22. Does HPV vaccine offers benefit for women who are already sexually active?
23. Gardasil gives protection against which types?
24. Cervarix gives protection against which Types?
25. Is there any contraindications for the vaccination?

RESULTS:

Socio-demographic features

Demographic profile of students shows that the maximum number of students who participated in the study was of 22-24 years age. Among them 70 were males (46.7%) and 80 were females (53.3%). Table. 1

Table.1 Percentage of participants

Sex	percentage
Male	46.7
Female	53.3

HPV knowledge

The answers were analyzed by the senior faculty members conducting the study. None of the students knew the correct incidence of cervical cancer in India and answers varied from 5-85%. 98% implicated HPV as a causative agent of cervical cancer but 19.3% did not know about its association with other cancers. 96% know that infection occur in heterosexual relationship.

According to 62% students, HPV infection spreads by sexual as well as non-sexual route but 38% said that it only spreads sexually. 90% of them answered that all cases of HPV infections progress to cervical cancer but none knew the time of progression and 80% were of the opinion that condoms prevent HPV infection and they did not know

whether HPV infection is treatable or not. Table.2

Table.2. Correct answers regarding awareness of HPV infection

Questions	Male	Female	Total
What is HPV?	100%	100%	100%
Does being infected with HPV mean a person will get genital wart or cancer	31.4%	30%	30.6%
What is the incidence of cervical cancer?	0	0	0
What are the other cancers caused by HPV infection?	21.4%	18.7%	19.3%
What is the most common risk factor for HPV infection?	100%	92.5%	96.25%

Knowledge about HPV vaccination

99% of the medical students know that HPV vaccination prevents cervical cancer. 54.6% thought that it could protect against other cancers also and 17.4% expressed that HPV vaccine could protect against other sexually transmitted diseases. 93.3% knew the correct age for initiation of vaccination. The vaccination schedule was not known to 90% of them. 12.6% were not aware of the duration of efficacy of the dose. Table. 3

Table.3. Correct answers regarding knowledge about HPV vaccine

Questions	Male students	Female students	Total
What age is ideal for HPV vaccine ?	92.85%	93.75%	93.3%
How long do HPV vaccine give protection?	36.6%	95%	87.4%
Do you know the dosage & schedule of the HPV vaccine?	10%	10%	10%
Does HPV Vaccine provide protection from other sexually transmitted diseases?	14.2%	20%	17.4%
What are the other cancers prevented by HPV Vaccine?	57.14%	52.5%	54.6%
Is regular cervical screening needed after taking HPV vaccine?	14.7%	18.3%	22%
Is it cost effective to vaccinate everyone?	16.7%	20.5%	37.2%

DISCUSSION:

Medical students are the future doctors who have an important role in preventing diseases. Hence knowledge about the cancer and prevention is essential. Majority of participants in our study were well aware of the preventable nature of cervical cancer. Most of them knew about its viral etiology. According to a study in April 2013 in a tertiary care, Delhi, none of the students knew the correct incidence of cervical cancer in India and 18% of them did not know that the HPV vaccination prevents cervical cancer and 50% were unaware of HPV infection and its association with other STD's and cervical cancer.(4) The lack of knowledge may be due to the fact that the HPV infection is mainly asymptomatic and in 90% of cases the infection clears off without treatment. The study by Durusoy, *et al.*, on HPV vaccine awareness and willingness of first-year students entering university in western Turkey revealed that the knowledge amongst them was remarkably poor and only 11.6% of females intended to be vaccinated.(5) In a study done in November 2014 by Dr.Nagasireesha Challa in Sri Venkateswara College among 127 students, the results were that most of the students knew well about HPV infection and vaccine and its dosage and schedule(6) In a study conducted in 2016 in a college, out of 1580 students girls(82.5%) have more knowledge about HPV vaccine and cervical cancer than boys. All of them agreed that girls should be vaccinated with HPV vaccine(7)

In 2017 a cross-sectional study done by Dr.Sethu Rathodl in Gandhi medical college, found that 93.3% students knew about HPV causes cervical cancer and 61.4% knew that vaccine is available. 96.6% students know that Pap smear is used for screening cervical cancer(8) The study by Zimet GD on the reasons for non-vaccination against HPV and future intentions among 19-26 year old women revealed that of the 185 non-vaccinated populations 48% were unlikely to do anything regarding the vaccination. The various reasons cited were that they were married or in a monogamous relationship, vaccine is too new, not having appropriate information, worried about side-effects or insurance coverage.(9)

In our study, majority of students knew that HPV virus causes the cervical cancer but none of them knew the incidence of cervical

cancer correctly. Females had more knowledge than males. The lack of knowledge among medical students is only tip of the iceberg. We found that medical teaching had a definitive impact on the understanding of this important public health issue, with regards to etiology, of cervical cancer, availability of the vaccine and its protective efficacy. We should encourage medical students in group discussions, interactive sessions and forums where all the doubts and aspects of HPV and its association with cervical cancer can be highlighted and clarified.

The major obstacles to implementation of HPV vaccine programs in our country as mentioned by Bhatla N *et al* included cost, acceptability, lack of public awareness and infrastructure, concern about unknown side-effects and social and religious barriers [10]. In their review article by Bharadwaj *et al*, high cost of the vaccines was stated as the major concern for mass vaccination program in India [11].

In order to control this problem, the education of public is to be carried out by public health care workers. Later in this awareness program interns, postgraduates, other health professionals also need to participate.

CONCLUSION:

To conclude, the concept of HPV vaccine will be amalgamated in practice only with its increased understanding by the provider and the recipient. Health professional will be able to play a pivotal role in popularizing this strategy. Our academic curriculum in the medical schools needs to focus more on such high priority practical upcoming issues. Better understanding of the major preventive public health issues by health care professionals will definitely be propagated well in the society. All medical students (today) will not be educators in medical schools, but they are the trustworthy sources to the society full of information in this internet era.

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