

## Knowledge, Attitude and Practice (KAP) Study of HPV Vaccination Among Medicos

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### ABSTRACT

**Objectives:** To assess the Knowledge, Attitude and Practice of HPV vaccine among medicos of Andhra medical college.

**Materials and methods:** This is a cross sectional observational study conducted among 200 medical students of Andhra Medical College. Data was collected through self reported questionnaire which included knowledge, attitude, practice towards HPV vaccination for cancer cervix prevention.

**Conclusion:** In the present study among medical students, it is found that majority of students knew that HPV may cause cancer in humans (95%) leading to cancer cervix in females (85%). Although 80% students knew the availability of vaccination against HPV infection, only 62.1% knew the correct dosing schedule. Only 36.3% students correctly answered that even vaccinated women can develop cancer. In our study only 25% of the students got vaccinated and all of them were females.

Medical college students should have the knowledge about the importance of role of HPV vaccination in the prevention of cancer cervix and should practice educating the public about HPV vaccination for young adolescent girls. If medical college students themselves do not have proper knowledge about HPV vaccination, the lack of knowledge of general population is much higher compared to medical college students, which is a cause of concern for health care sector particularly at the grass root level in the rural and suburban population.

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### I. Introduction:-

Cancer cervix is the 4th most common cancer in women worldwide. Human papilloma virus is a major cause of cervical cancer. In India cancer cervix is the 2nd most common leading cause of female cancer. In India about 1,32,000 new cases and 80,000 deaths occur due to Ca cervix every year<sup>1</sup>.

HPV is member of family papilloma viridae. They are small non enveloped DNA virus<sup>2</sup>. There are over 100 genotypes of which 15-20 are oncogenic. It is important to detect HPV infection as there is a period of 15-20yrs for the disease to progress from pre invasive to invasive stage, thus giving the clinician effective time to intervene.

Worldwide HPV 16, 18 contribute to over 70% of all cervical cancer cases<sup>3</sup>, where as HPV 6, 11 contribute to about 90% of benign lesions like genital warts<sup>5</sup>. Evidence shows that HPV also causes cancer of oropharynx, anus, vagina, vulva and penis<sup>6</sup>. It has been proven that HPV vaccination before the start of sexual life is effective in preventing HPV infection and cervical cancer<sup>7</sup>.

Two types of HPV vaccines are licensed in India in 2006. Bivalent type (Cervix vaccine) which gives protection against HPV 16, 18. Quadrivalent type (Gardasil) which gives protection against HPV 6, 11, 16, 18<sup>4</sup>. Indian Academy of Pediatrics added HPV vaccine into the list of recommended vaccines, but it is still not available in the national routine immunization programme.

In 2017 WHO emphasized about HPV vaccination of 9-14-year-old girls as one of the 5 recommended interventions against non communicable diseases. In spite of strong evidence that HPV vaccination will reduce the incidence, morbidity, mortality from Ca cervix, acceptability of HPV vaccination in India is still on the lower side, due to high cost, stigma, lack of knowledge, safety and efficacy concerns. In India, cost of HPV vaccine is around Rs.12000, for 3 doses, which plays a vital role in the acceptance of vaccine which is not available in routine immunization programme.

HPV vaccine will reduce the incidence of cancer cervix, thus reducing the detection rate of cervical cancer but is not an alternative to cancer cervix screening, thus explaining the importance of routine screening even in vaccinated women.

HPV vaccination is a primary prevention strategy where as screening for Ca cervix is secondary prevention. These health care providers' knowledge attitude and recommendations play an important role in the acceptance of HPV vaccination. Parents of adolescent girls depend on the advice given by health care providers whether or not to get their children vaccinated. This study aims to analyze the knowledge, attitude and practice among medicos about the importance of HPV in causing cancer in humans and its prevention by HPV vaccination.

## **II. Methods:-**

This was a cross sectional observational study. MBBS undergraduates, interns from Andhra Medical College, Visakapatnam were recruited. Written and informed consents were obtained from all participants. Data was collected through self reported questionnaire which included knowledge, Attitude, Practice towards HPV vaccination for Cancercervix prevention

### **Knowledge of HPV Vaccination:**

This aspect includes the following questions

- 1) Is HPV sexually transmitted?
- 2) Can HPV cause cervical cancer?
- 3) Can HPV cause penile cancer?
- 4) Is HPV vaccine available in India?
- 5) Number of doses of HPV vaccine?
- 6) Can vaccinated women develop cancer?
- 7) Does condom use prevent HPV infection?
- 8) What is the ideal age group to recommend HPV vaccine?

### **Attitude**

- 1) Is HPV vaccine effective in preventing cancer?
- 2) Is HPV vaccine safe?
- 3) Is HPV vaccine safe in pregnant women?
- 4) Is HPV vaccine protective for sexual partner?

### **Practice**

- 1) Are you vaccinated?
- 2) Would you recommend HPV vaccine to your family?
- 3) What are the barriers to recommend HPV vaccine ?

## **III. Results**

- Study was conducted on 200 medical students which included 66.2% females and 33.3% males

### **HPV vaccination knowledge**

About 97.5% knew that HPV can be sexually transmitted. Total 95% of the students knew that HPV infection can cause cancer in humans. Around 85% knew that it can cause cancer in females but only 54% knew that it can cause cancer in males. About 80% students knew about the availability of vaccine in India but only 62.1% knew the correct dosing schedule. Only 36.3% students knew that even vaccinated females can develop cancer

### **HPV vaccination attitude**

75% students considered the vaccine to be safe and only 1.8% considered it to be unsafe, while 23.2% were not sure about its safety. Total 71.5% students said that the vaccine would be effective against cancer, 6% considered it ineffective while 22.5% were not sure of its effectiveness. 63% students consider HPV vaccination can be protective for sexual partner as well

### **HPV vaccination practice**

Only 25% students were vaccinated while the rest of 75% were not vaccinated. All of the vaccinated students were females and none of the boys were vaccinated. When asked why they have not been vaccinated, 45% didn't get vaccinated due to lack of knowledge, 21% were doubtful of this effectiveness, 10% were afraid of side effects, 9% due to its high cost and rest due to other reasons like being male or they did not consider the vaccine to be important.

## **IV. Discussion**

Cervical cancer is one of the vaccine preventable cancers caused primarily by HPV infection. In the present study among medical students, it is found that majority of students knew that HPV may cause cancer in

humans(95%) leading to cancer cervix in females (85%). The results are similar to study done in Rama Medical College, Hapur.

In our study 54% students knew that HPV can lead to cancer in males which is more than the study done in Delhi, in which only 44% of the students answered that HPV causes vulval, penile, oral and vaginal cancers.

Although 80% students knew the availability of vaccination against HPV infection , only 62.1% knew the correct dosing schedule, which shows the lack of knowledge of students towards HPV vaccination. This is an issue that needs to be addressed as these are the future doctors and because of their lack of knowledge, they will not be able to motivate the society for vaccination against HPV.

Only 36.3% students correctly answered that even vaccinated women can develop cancer. So , students must be made aware that even after complete vaccination for HPV, the person can develop cancer , which is why routine screening is recommended even in vaccinated women.

In this study majority(75%) of students considered vaccine to be safe , and 71.5% believed that vaccine would be effective against cancer. 63% students answered that HPV vaccination can be protective for sexual partner as well, which is a very important aspect of HPV vaccination to be explained to general population while counselling for HPV vaccination.

In our study only 25% of the students got vaccinated and all of them were females. On asking them about the reason for not being vaccinated, the most common reason is due to lack of knowledge which again emphasizes the fact that without proper knowledge, the practice of even medical college students is below average.

### V. Conclusion

Thus, medical college students should have the knowledge about the importance of role of HPV vaccination in the prevention of cancer cervix and should practice educating the public about HPV vaccination for young adolescent girls. If medical college students themselves do not have proper knowledge about HPV vaccination, the lack of knowledge of general population is much higher compared to medical college students, which is a cause of concern for health care sector particularly at the grass root level in the rural and suburban population.

	A	B	C	D
1 Question		Right	Wrong	Others
2 Can hpv cause cancer in humans?		190(95%)	7(3.5%)	3(1.5%)
3 Can hpv cause cervical cancer ?		170(85%)	21(10.5%)	9(4.5%)
4 Can hpv cause penile cancer?		108(54%)	30(15%)	62(31%)
5 Is hpv vaccine available in india?		160(80%)	18(9%)	22(11%)
6 Number of doses of hpv vaccine?		124(62%)	54(27%)	22(11%)
7 Can vaccinated women develop cancer?		72(36%)	99(49.5%)	29(14.5%)
8 Does condom use prevent hpv infection?		90(45%)	93(46.5%)	17(8.5%)
9 Age group to recommed hpv vaccine?		72(36%)	123(61.5%)	5(2.5%)
10 HPV vaccine is contraindicated in pregnancy		82(41%)	110(55%)	8(4%)

	A	B	C	D
1 Questions		Right	Wrong	Others
2 Cost is one of the major barriers for acceptance		190(95%)	10(15%)	
3 Is hpv vaccine safe?		50(71.5%)	5(2.5%)	45(22.5%)
4 Is hpv vaccine effective in preventing cancer?		143(71.5%)	12(6%)	45(22.5%)
5 Is hpv vaccine protective for sexual partner?		126(63%)	69(34.5%)	5(2.5%)
6 Sexually transmitted nature is a barrier for recommendation		134(67%)	63(31.5%)	3(1.5%)

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