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Student Original Article

A study of awareness of human papilloma virus vaccine in a teaching hospital

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ABSTRACT

Background: Cervical cancer is the second most common cancer in women worldwide and the most common cancer causing death in the developing countries like India. The objective of this study was to obtain a baseline measure of several key domains of attitudes and knowledge concerning Human Papilloma vaccine in a population-based sample.
Methods: The study was conducted at the SKNMC and GH, Pune, India. A total of 90 subjects (divided into 3 groups) were included in the questionnaire based study.
Result: More than 93% ($n = 27$out of 30) of patients (group I) were not aware about cancer cervix and role of HPV vaccine in its prevention and the extent of protection conferred by HPV vaccine. Amongst the students and residents, residents had an upper hand in knowledge about HPV virus and vaccine.
Conclusion: Despite a surprising lack of knowledge about newer HPV vaccine, most patients are prepared to accept new vaccinations. Educational efforts on the part of public health officials may improve public receptivity of newer vaccines. These results are helpful in benchmarking HPV-related knowledge and could be used in the development of appropriate educational messages.

1. Introduction

Vaccine is a preparation of attenuated live or killed microorganisms or antigenic portions of these agents present to a potential host to induce immunity and prevent disease. Vaccination and immunization are often used as interchangeable terms. However the former denotes only the administration of a vaccine, where as the latter describes the process of inducing or providing immunity by any means, whether active or passive. Vaccination is ranked as one of the greatest public health achievements of the twentieth century and is the principal factor contributing to the reduction of morbidity and mortality among children around the world.[1]

Routine immunization schedules have been developed for different countries, modified from time to time, based on the prevalence of infectious diseases, their public health importance, availability of suitable vaccines, their cost benefits factors and logistics. In India, the expanded program on immunization (EPI) and the universal Immunization Program

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(UIP) have been able to afford protection for much of the target population against vaccine preventable diseases. It is now acknowledged that virus infections account for 10 to 20% of human malignancies. These include hepatocellular carcinoma caused by hepatitis B or C viruses, uterine cervical cancer by certain types of papilloma viruses, anaplastic nasopharyngeal carcinomas by EB virus and adult cutaneous T cell lymphoma/leukemia by HTLV-1. An association between human papilloma virus (HPV) infection and cancer uteri, particularly types 16 and 18 has been established.[2] HPV selectively infect the epithelium of skin and mucous membranes. These infections may be asymptomatic, produce warts or be associated with a variety of both benign and malignant neoplasias.[3]

Vaccines against HPV are available in the market. Vaccines have been shown to be efficacious in preventing infection with HPV types 16 and 18 among adolescent females and women[4–6] Eighty-percent of cervical cancer cases diagnosed each year occur in developing countries[7] in part due to the lack of availability of early prevention cytology-screening programs. Educational and attitudinal barriers have also been identified as major reasons for low screening prevalence in developing countries[8–10] HPV vaccination offers protection against the development of cervical cancer and associated morbidities and mortalities, and is especially valuable in resource-limited settings where secondary prevention methods such as cytology screening are not widely available and may not be cost-effective.[11] In the absence of accessible cytology screening, implementation of an HPV immunization program should be a public health priority in India to reduce the high burden of cervical cancer associated morbidity and mortality. This study aimed to determine HPV knowledge, acceptability and other factors associated with the feasibility of HPV vaccine implementation in our set up. To the best of our knowledge, this is the first study carried out at a tertiary center, of western Maharashtra. We tried to analyze the awareness and acceptance of HPV infection and vaccination for cervical cancer prevention, as well as factors associated with its causation.

2. Methodology

This was a questionnaire based study. Study was carried out from Jan 2014 to May 2014 at our hospital. The study protocol was approved by the institutional ethical committee. Inclusion criteria included, subjects who voluntarily agreed for the study questionnaire. A non-validated self-administered questionnaire was prepared consisting of 10 questions in the local language Marathi and English to assess knowledge, attitude and practice among the subjects about HPV vaccine. These were closed questions with a YES/NO response. Total 90 subjects in three groups were enrolled for the study. Group I consisted of 30 randomly selected parents of the children attending pediatric OPD. Group II consisted of 30 randomly selected first and second MBBS students. Group III consisted of 30 randomly selected Senior residents. These were selected because patients, who present general population and are least resourceful, medical students who are in between both the groups and residents who are most resourceful and are supposed to have knowledge about newer vaccines. Thus this type of assessment involving three different cohort groups was planned. Data analyses was performed with Microsoft Office Excel®. Frequencies and percentages were reported amongst the groups.

3. Results

Depending on the type of the response to a set of questions the results were divided into four groups. The results have been tabulated in tabular form (Table 1) in percentage as well as in numbers.

a) Awareness about term vaccination, Human Papilloma Virus, vaccine for HPV:

80% ($n = 24$) of the patients were aware of the term vaccination, as compared with 90% ($n = 27$) students and 100% ($n = 30$) residents.

Only 10% ($n = 3$) of patients were aware of Human Papilloma Virus as compared with 93% ($n = 27$) students and 100% ($n = 30$) residents.

7% ($n = 2$) of the patients were aware that any vaccine exists for HPV virus. As against 90% ($n = 27$) students and 100% ($n = 30$) residents were aware.

b) Awareness about common cancers in females:

None of the OPD patients could answer which cancers are common in female. Only 56% ($n = 16$) and 83% ($n = 24$) of students and residents respectively could answer this correctly.

Table 1 – List of questions and responses among three groups.

Sr no	Questions	Patients ($n = 30$)	Students ($n = 30$)	Residents ($n = 30$)
1	Were aware of term **vaccination**	80% ($n = 24$)	90% ($n = 27$)	100% ($n = 30$)
2	Were aware of **HPV virus**	10% ($n = 3$)	93% ($n = 27$)[a]	100% ($n = 30$)
3	Were aware about **HPV vaccine**	7% ($n = 2$)	90% ($n = 27$)	100% ($n = 30$)
4	Were aware about **common cancer** in females	0% (n = nil)	56% ($n = 16$)	83% ($n = 24$)
5	Awareness about **vaccine** which can **prevent** cervical cancer	37% ($n = 11$)	63% ($n = 18$)	90% ($n = 27$)
6	Answered correctly the **cost of vaccine**	3% ($n = 1$)	23% ($n = 6$)	30% ($n = 9$)
7	Had a knowledge that vaccine is given in **teenagers**	0% (n = nil)	33% ($n = 9$)	43% ($n = 12$)
8	Willing to **vaccinate girl child** for HPV vaccine	80% ($n = 24$)	100% ($n = 30$)	100% ($n = 30$)

[a] The figures in bracket indicates the number (n) rounded off to whole number.