



ACCEPTANCE OF HPV VACCINES AMONG WOMEN ATTENDING GYNECOLOGY OPD IN A TERTIARY CARE HOSPITAL IN DELHI

Namoijam Basanti

Senior Resident, Department of obstetrics and gynecology, Regional Institute of Medical Sciences, Imphal, Manipur.

Laishram Trinity Meetei*

Assistant Professor, Department of obstetrics and gynecology, Regional Institute of Medical Sciences, Imphal, Manipur.*Corresponding Author

ABSTRACT **INTRODUCTION:** Cervical cancer is the most common gynecological cancer among women in India (GLOBOCAN 2020). It is caused by persistent infection with one of the high risk human papilloma viruses (HPV). Vaccines are available against these viruses. The ideal time for vaccination is before the start of the first sexual activity. The vaccine can also be given among males. There also are various screening tests available for the detection of precancerous lesions of the cervix so that treatment can be undertaken during the early course of the disease. **OBJECTIVES OF THE STUDY:** To determine the awareness of cervical cancer, the screening tests, and the HPV vaccines among women attending gynecology OPD in a tertiary care hospital. **MATERIALS AND METHODS:** It was a cross-sectional, hospital based study conducted among 200 women attending the OPD of department of Obstetrics and Gynecology, Hamdard Institute of Medical Sciences, Delhi from 21st to 23rd February, 2021. A pre- designed, pre- tested closed ended questionnaire was used to collect the required data. **RESULTS:** Out of the 200 participants, only 54 (27%) had heard of carcinoma of cervix, 42 (21%) knew about the screening tests while only 13 (6.5%) had knowledge about the HPV vaccine. After being educated about the vaccine, only 44.5% were willing to accept the vaccine. The most common reason for refusal was the lack of adequate information on the effectiveness or safety of the vaccine. **CONCLUSION:** Cervical cancer is a preventable cancer. Vaccination and successful screening are the key to decreasing the burden of cervical cancer in our country.

KEYWORDS : cervical cancer, precancerous, screening, HPV vaccine

INTRODUCTION

Cervical cancer is the most common gynecological cancer among women in India. The incidence was 123,907 in 2020, accounting for 18.3% of all the cancers among females¹. It is caused by persistent infection with high risk Human Papilloma Viruses (HPV), of which HPV 16 and 18 are responsible for more than half of the cervical cancers. High risk factors for infection includes poor hygiene, early onset of sexual activity, multiple sexual partners, poor socio-economic conditions, immune-compromised.

The screening for cervical cancer can be done by cervical smear examination and HPV testing. Papanicolaou test (Pap test) is the most commonly performed cervical smear examination. The American Cancer Society guidelines² says that the cervical cancer screening should begin at the age of 25, at the frequency of every 3 years with a pap test, and every 5 years by co-test with HPV testing. After 65 years of age, screening can be stopped if the screening in the past 10 years shows normal results. People who have been vaccinated against HPV vaccine should still follow the same guidelines.

Currently, three vaccines against HPV are FDA approved for prevention against cervical cancer³. Bivalent vaccine (cervarix) protects against HPV 16 and 18. Quadrivalent Gardasil protects against HPV 6, 11, 16, 18; and Nona-valent Gardasil protects against infection with HPV 6,11,16,18,31, 33, 45,52 and 58. Cervarix is given at 0, 1, 6 months while quadrivalent and nona-valent vaccines are given at 0, 2, 6 months. Cervarix has a cervical cancer protection rate up to 70%, quadrivalent vaccine can protect up to 75%, while nona-valent vaccine up to 90%.

The ideal time for vaccination is prior to HPV exposure (before the first sexual contact). WHO recommends 2 doses for girls aged 9-14 years. The Advisory Committee on Immunization Practices (ACIP) recommends vaccination starting at age 11, 12; but, it can be given as early as 9 years of age. Two dose schedule is advised before 15 years⁴. The vaccines were initially designed for use among females. Now, it can also be given among males. In 2018, FDA approved the use of HPV vaccines in both men and women up to the age of 45.

In India, adolescent girls are the primary targets of vaccination. Both bivalent and quadrivalent vaccines were licensed for use in 2008, nona-valent in 2018. HPV vaccination demonstration projects were started in Andhra Pradesh and Gujarat in 2009 but, they were suspended due to reported deaths which later on was identified to be unrelated to the vaccination⁵. The Delhi state government initiated the vaccination in 2016, targeting girls aged 12-13 years using the bivalent

vaccine.

OBJECTIVES OF THE STUDY

- 1) To determine the awareness of the cervical cancer among women attending gynecology OPD in a tertiary care hospital.
- 2) To know the attitude of the women towards screening for cervical cancer.
- 3) To find out the awareness regarding the HPV vaccine among them.
- 4) To determine the willingness to accept the vaccine after imparting knowledge on it.

MATERIALS AND METHODS

A cross sectional, hospital based study was conducted in the outpatient department of obstetrics and gynecology of Hamdard Institute of Medical Sciences for a period of 4 days from 21st to 23rd February, 2021. Females within the age group of 11 to 40 years were included in the study.

A total of 200 women participated. A pre-designed, pre-tested, closed-ended questionnaire was used. Demographic and socio-economic characteristics were noted down. Participants were enquired about any knowledge regarding the cervical cancer- causation, prevention, screening tests, vaccination and treatment. In the end, after imparting the basic knowledge regarding the cervical cancer and the vaccination against it, each participant was followed up for the acceptance of the vaccine. The data were analysed in the SPSS version 20.

RESULTS

Out of the 200 study participants, 112 (56%) belonged to the age group of 21-30 years. Majority of the study participants were literate, 40% were at least graduates. More than half of the participants (55.5%) belonged to the middle class.

Table 1. Characteristics of the participants

Socio-demographic characteristics of the participants		Number	Percentage
Age (years)	11-20	15	7.5%
	21-30	112	56%
	31-40	55	27.5%
	41-45	18	9%
education	Illiterate	9	4.5%
	Primary school	27	13.5%
	High school	40	20%
	Higher secondary	44	22%
	Graduate or more	80	40%

Socio-economic status (BG Prasad scale)	Upper	3	1.5%
	Upper middle	17	8.5%
	Middle	110	55%
	Lower middle	55	27.5%
	lower	15	7.5%

It was found that only 54 out of the 200 participants (27%) had heard of cervical cancer.

Table 2. Source of knowledge about carcinoma of cervix

Source	Number of participants
Social media	17 (31.5%)
TV/newspaper/radio	13 (24.1%)
Friends/relatives/neighbors	9 (16.7%)
Course of study	5 (9.2%)
from doctors, nurses	10 (18.5%)

As shown in table 2, majority of the respondents got the knowledge of carcinoma of cervix from social media (31.5%) and from the mass communication like television, radio, newspaper (24.1%).

Further in the study, it was also found that only 13 women (6.5%) had known about the availability of HPV vaccine for prevention against cervical cancer.

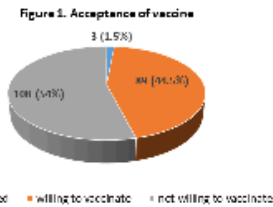


Figure 1 shows the attitude of the participants towards the HPV vaccine. A total of only 3 people (1.5%) were actually vaccinated with the HPV vaccine (with three doses of bivalent vaccine) in the study. Even after given information regarding the vaccine available for prevention against cervical cancer, more than half (54%) of the participants refused to accept the vaccine. As shown in table 3, most of them (63.9%) gave reason of lack of adequate information on the effectiveness or safety of the vaccine. Fifteen respondents (13.9%) claimed that the vaccine was not affordable to them, 4.6% refused because of the procedure (painful), while 17.6% gave no specific reasons for refusal.

Table 3. Reasons for refusal of the vaccine

Expensive	15 (13.9%)
Painful	5 (4.6%)
Lack of knowledge	69 (63.9%)
Not interested (reasons not specified)	19 (17.6%)

It was also found in the study that only 21% of the participants had known about the tests available to screen cervical cancer. Among all the participants, 78 (39%) still refused to undergo screening test even after being given adequate information on the usefulness of the test in early detection of cervical cancer and its precancerous conditions.

DISCUSSION

In a cross sectional study by Jyoti S et al6 conducted to know the awareness and acceptability among females in Delhi, 85.11% of the participants were aware of cervical cancer as contrast to only 27% in our study though the characteristics of the study populations were almost comparable in both the studies.

In another study conducted by Chellapandian P et al7 among health professionals in a tertiary care hospital in Chennai, 90.6% were aware of cervical cancer, and 86.2% knew that HPV causes cervical cancer.

In yet another study by Muhammad EH et al8 to find out the acceptability of HPV vaccine among the students of business administration in a place in South Africa, 74% of the study participants had heard of cervical cancer, and only 26.2% had heard about the HPV.

Jyoti S et al6 also found that 84.6% of the study group were willing to undergo pap smear test while very few participants were willing to vaccinate themselves against HPV. The more educated group were more willing for the vaccine (80.60% of the graduates). Deeksha P et al9 had in another study on the awareness and attitude towards HPV

vaccine among a group of medical students, found that the awareness regarding the availability of vaccine against cervical cancer was 75.6% while the acceptance of the vaccine was 67.8%.

In our study, only 44.5% were willing to accept the vaccine. The most common reason given for non-acceptance was the lack of adequate knowledge (63.9%). The others gave reasons of cost (13.9%), painful procedure (4.6%). However, in the study by Jyoti S et al6, it was found that 71% refused vaccination against HPV because of concerns about the post-vaccination complications, 3% because of the cost, and 6% due to social stigma. Lack of awareness regarding the vaccine was the main reason for the non-vaccination status in the study by Chellapandian P et al7. In yet another study by Degarage A et al10, 79.9% of parents of adolescent girls were willing to vaccinate their daughters.

CONCLUSION

Cervical cancer, despite being preventable, continues to be a big burden to our society. It is the second most common cause of cancer related deaths in India (GLOBOCAL 2020). Lack of awareness regarding the disease and the vaccine seems to continue being the main reason for it. There is a need to decrease the KAP gap regarding the HPV vaccination. HPV vaccination is the key in eliminating the cervical cancer and hence to achieve the WHO goal of eliminating cervical cancer by the year 2030.

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