

Overview of Human Papilloma Virus

B. Jayabharathi*, P. Abirami*

Author Affiliation: *Associate Professor, Department of Obstetrics & Gynecology Nursing, SRM College of Nursing, SRM University, Chennai, Tamil Nadu, India.

Abstract

Human papilloma virus (HPV) is a group of more than 150 related viruses. HPV is the most common sexually transmitted infection with most sexually active men and women being exposed to the virus at some point during their lifetime. HPV is transmitted through intimate skin-to-skin contact. Person can also get HPV by having vaginal, anal, or oral sex with someone who has the virus. The Food and Drug Administration (FDA) has approved three vaccines to prevent HPV infection and these vaccines provide strong protection against new HPV infections.

Keywords: Human papilloma virus (HPV); Food and Drug Administration (FDA).

Introduction

HPV is a group of more than 150 related viruses. Each HPV virus in this large group is given a number which is called its HPV type. HPV is named for the warts (papillomas) some HPV types can cause. Some other HPV types can lead to cancer. Men and women can get cancer of mouth/ throat, and anus/ rectum caused by HPV infections. Men can also get penile HPV cancer. In women, HPV infection can also cause cervical, vaginal, and vulvar HPV cancers. But there are vaccines that can prevent infection with the types of HPV that most commonly cause cancer.

How do People Get HPV?

HPV is transmitted through intimate skin-to-skin contact. Person can get HPV by having vaginal, anal, or oral sex with someone who has the virus. It is most commonly spread during vaginal or anal sex.

HPV is so common that nearly all men and women get it at some point in their lives. HPV can be passed even when an infected person has no signs or symptoms. Person can develop symptoms years after being infected, making it hard to know when the person first became infected.

Symptoms of HPV

Genital warts usually appear as a small bump or groups of bumps in the genital area. They can be small or large, raised or flat, or shaped like a cauliflower. HPV cancers include cancer of the cervix, vulva, vagina, penis, or anus. HPV infection can also cause cancer in the back of the throat, including the base of the tongue and tonsils [1].

HPV and Cancer

There are many different HPV types, which are

Reprint Request: B. Jayabharathi, Associate Professor, Department of Obstetrics & Gynecology Nursing, SRM College of Nursing, SRM University, Chennai - 600089, TamilNadu, India.
E-mail: jayabharathimariyappan23@yahoo.co.in

(Received on 03.06.2017, Accepted on 13.06.2017)

considered either 'low-risk' or 'high-risk'. Some high-risk HPV types can cause serious illness including cancer. Sometimes HPV does not clear the body naturally - usually when the infection is with high-risk types. This is called 'persistent' HPV infection. Persistent HPV infection can cause abnormal cells to develop on the cervix, which may develop into cervical cancer, usually over many years, if they remain untreated. Although cervical cancer is the most common type of cancer caused by HPV, persistent infection is also known to cause other cancers affecting men and women, including penile, anal, vulval, vaginal and mouth/throat [2].

Diagnosis of Human Papillomavirus

If warts or lesions are visible, a health care provider can generally make a diagnosis of HPV during a visual inspection. However, additional tests may need to be completed to evaluate further for the presence of HPV which include a *Pap smear*, a *DNA test* and the use of *acetic acid*.

Treatments for Human Papillomavirus

At times, warts will often self-resolve without treatment. However, there are topically applied medications to remove the wart itself and include over-the-counter salicylic acid for common warts. It is important to speak with the health care provider about which treatment is best depending on the type and location of the wart being treated. It is also important to note that although warts and cellular changes may be removed or resolve, the virus can remain in the body and can be passed to others, as there is no treatment to remove the virus from the body.

Prevention of HPV

Although HPV is a very commonly contracted virus, there are certain things that can be done to try to prevent contracting the virus and include abstinence, monogamous sexual relationships, not having sex with visible genital warts and the use of HPV vaccines [3]. HPV vaccination can reduce the risk of infection by the HPV types targeted by the vaccine. The Food and Drug Administration (FDA) has approved three vaccines to prevent HPV infection: Gardasil®, Gardasil®9, and Cervarix®. These vaccines provide strong protection against new HPV infections, but they are not effective at

treating established HPV infections or disease caused by HPV.

Who should Get the HPV Vaccines?

All children who are 11 or 12 years old should get two shots of HPV vaccine six to twelve months apart. Adolescents who receive their two shots less than five months apart will require a third dose of HPV vaccine. Teen boys and girls who did not start or finish the HPV vaccine series when they were younger should get it now. HPV vaccine is recommended for young women through age 26, and young men through age 21 [4].

Should the Vaccines be given to People who are Already Infected with HPV?

Although HPV vaccines have been found to be safe when given to people who are already infected with HPV, the vaccines do not treat infection. They provide maximum benefit if a person receives them before he or she is sexually active. It is likely that someone exposed to HPV will still get some residual benefit from vaccination, even if he or she has already been infected with one or more of the HPV types included in the vaccines.

Conclusion

Human papillomavirus (HPV) is the most common sexually transmitted infection with most sexually active men and women being exposed to the virus at some point during their lifetime. Person can get HPV by having vaginal, anal, or oral sex with someone who has the virus. HPV vaccine is important because it protects against cancers caused by human papillomavirus infection.

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