



The Role of Vaccines in the Prevention of HPV Cervical Cancer in Iran between (2018 -2020)

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Abstract: *Cervical cancer is one of the leading causes of death in women of childbearing age in developing countries. Are related. The HPV study is the fourth most malignant disease in women in the world. 15% of cervical cancers with the virus and cervical cancer was performed. The present HPV aims to investigate the role of vaccines in the prevention of infection. This study reviews information between 2018 and 2020 in Iran by searching databases. The most common sexually transmitted infection is self-limiting. HPV in men and women. HPV vaccination, which is associated with the development of oral-anal cancers, including cervical cancer and genital warts, HPV infection prevents. Vaccination Gardasil vaccine can provide up to 11% protection against cervical cancer. The new nine are up to 19% effective against highly malignant cancers of the cervix and even the vagina. Increase day ads and ways of transmission and pathogenesis and treatment of vaccination of this virus leads to improved control of HPV over the prevalence. Disease and ultimately controlling the consequences of the virus as well as the possibility of eradicating cervical cancer in decades. The future will be.*

Keywords: *incidence; prevention; cervical malignancy; papilloma virus vaccine; papilloma virus*

I. Introduction

A large family (HPV) of human papillomavirus. This is one of the most common viruses and sexually transmitted infections. There are no symptoms and HPV is an infection in most cases. It is self-limiting. This infection multiplies the mucous membrane is accompanied by benign or malignant. HPV contains the genome. It has two strands and DNA. Infects the skin and mucous membranes¹. A new study published in the Cochrane Library shows that human papillomavirus (HPV) vaccines protect against cervical lesions in young women (especially those who have been vaccinated between the ages of 15 and 26). This review also summarizes the findings of harms of this vaccine that have been evaluated in randomized controlled trials. Most people who experience sexual contact at some point in their lives will be exposed to the human papillomavirus (HPV). In most women, HPV infection is cleared by the immune system. When the immune system does not kill the virus, persistent HPV infection can cause abnormal cervical cells. These lesions are known as cervical "precancerous lesions" because if left untreated, they can develop into cervical cancer over time.

There are 190 types of HPV. With cervical cancer into two categories: low-risk and high-risk. HPV 15 types - are divided. 21 -25-31-33-35-31-19-, the most common of which are 16, 69 and 93 HPV components. 51-59-56-52-51 Types are high risk. But there is little evidence of carcinogenesis. Low risk HPV 3 (Most, there are two types)². and types 11 and 6 are responsible for 11% of genital warts are HPV. 5% of cancers in men and women with infection. Are together. Low risk types such as 6 and 11 triggers Cervical lesions with low malignant potential, warts. Genital and oral lesions are swallowed.^{4&3}

Cervical cancer, the third most common malignancy. Female genitalia as well as the second most common cancer in women. 91% of cell carcinomas - in 11 HPV DNA. Is

Pavement and cervical adenocarcinoma as well as in 1 found-) CIN (precancerous lesions of the cervix 31 and -19- be. The most common genotypes involved include 16 5% and 9% of cases are 12%, 25%, respectively, in 21 found. 6 and 19 in association with HPV in the United States in addition to cervical cancer, there are HPV infections Causes other genital anal cancers such as cancer The vulva, vagina, penis, rectum and oropharyngeal cancer Includes: host factors and HPV 9 (risk factors for infection)⁵. Environmental and behavioral and virus-related factors the most important of these factors can be the age of the person, Smoking, prolonged use of hormonal agents, Sex with different people, chlamydia infection Trachomatis, non-use of condoms and nutritional factors Cited.

From viral agents that can occur and HPV can play a role in cancer and trans-HPV contamination with several types named. Based on Various studies, the most important risk factor for infection,) Having multiple sexual partners throughout life). Cervical cancer is both preventable and treatable and its prevalence in developing countries is 6 times 6 the developed countries. Most of the developed countries have the main cause. There is a lack of appropriate screening programs in these countries⁶. HPV infection with certain types of HPV vaccine Progression of cervical and anogenital cancer and genital warts Is accompanied, prevents. Public health institutions In Australia, Canada, Europe and the United States to prevent Cervical cancer that occurs due to infection with the virus, they recommend vaccination. The World Health Organization also recommends to do 1 year) before experience - Vaccination in girls 13 Sexual intercourse (and has been doing so for years HPV vaccination table 59 countries, 2018.) Have been vaccinated⁵. Gardasil vaccine alone against four types of HPV 16 and 19 and cervarix vaccine versus, 11, including 6. 11, 16 and 19 provide protection) HPV two types It should be noted that these vaccines play a preventive role and in the treatment of HPV infection or cervical cancers are not effective. HPV infection In HPV the present study aimed to investigate the role of vaccines Prevention of cervical cancer due to its importance in the development of anal genital malignancies was performed⁷.

Figure 1, These images show how cervical cells that have long-lasting infections with high-risk HPV can change over time and become abnormal. Abnormal cervical cells may also return to normal even without treatment, especially in younger women. LSIL and HSIL are two types of abnormal changes to cervical squamous cells.

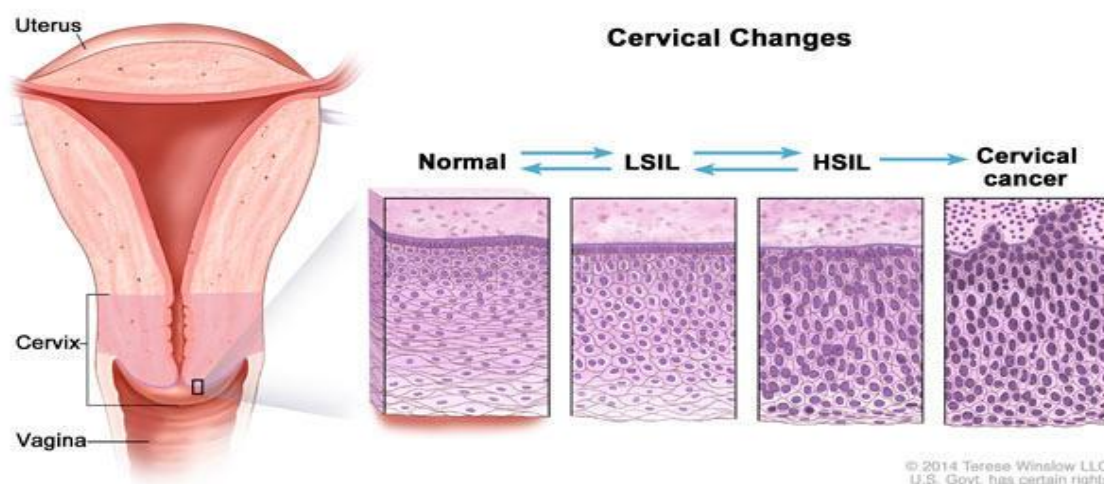


Figure 1. Cervical Changes

II. Research Methods

In the present review study, which is the goal of the impact study and the role of vaccines in the prevention of HPV cervical cancer. The present HPV aims to investigate the role of vaccines in the prevention of infection. This study reviews information between 2018 and 2020 in Iran by searching databases. The most common sexually transmitted infection is self-limiting. HPV in men and women. HPV vaccination, which is associated with the development of oral-anal cancers, including cervical cancer and genital warts, HPV infection prevents.

III. Results and Discussion

3.1 Results

In various studies, the prevalence of HPV was reported to be 22-12% Increased prevalence in people over 25 Year is also reported⁸. Prevalence of HPV in women 25- 19 years with a lifelong sexual partner 12.3%⁸. Its prevalence in people with two sexual partners during life expectancy 22.3% and in people with three or more partners.^{9&10} (is 31/5% of sex. Existence of HPV No specific treatment against infection does not have. From destructive therapies such as Cryo, Terry Chloroacetic acid, laser and surgical resection for treatment pre-malignant lesions are used. In countries Low-income, pre-malignant cervical lesions mainly with Cryotherapy is treated. Surgical resection of lesions, it is an effective method. Treatment by electrical surgeon is required in larger wastes Leep (HPV is also vaccinated against high-risk types of HPV They are the cause of cervical cancer and both types Low risk of causing genital warts, Provides protection. There are currently three types of vaccines Available in the market^{11 &12}. Gardasil: This vaccine is for both men and women available and 111% against virus infection types 6 and 11, which cause 11% of HPV genital warts are, provide protection and also types 16 and 19 that with 91% of cervical cancers and many cancers.

The vagina, vulva and anal are connected, covers. (Cervarix: This vaccine can only be used for women. This vaccine also prevents about 100% from type 16% and 19% effective) associated with 91 HPV infection with Cervical cancers (studies also show Cervarix has been reported to be effective against other high-risk infections It also provides cross protection¹³. Gardasil: This vaccine was given in December 2112 by This vaccine was registered by the FDA (Food and Drug Administration) covers. This vaccine is based on the new HPV, 1 type Which causes most HPV warts against two types of low risk, 16 HPV are genital), 6 and 11and 9 high-risk types 52 and 59 which are in many types of, 25, 33, 31, 19 Cancers including 11% of cervical cancers as well the vagina and vulva are found, providing protection. It is recommended that all women aged 26 years to receive this vaccine. About half of 15 years of diagnosis, new infections in women aged 22 years This vaccine is given specifically in categories 19 years - 15 years more effective than age groups 25 - Age 19 It is likely that the vaccine will be less effective at older ages The reason for the presence of resistant infections at the time. Vaccination is in these women¹⁴.

The latest estimates based on the teen immunization program in 2113 in the United States showed that) NIS 261% of adult girls and 22% of adult boys, single or single dose Have received that this is more HPV than the vaccine. Meaning of a 3% increase in vaccine intake in girls and 9% of boys get vaccinated than in the past. Despite this increase, still in 21% of girls and approximately 61% of boys have not been vaccinated.¹⁵ Gardasil intramuscular vaccine for girls Used for 1 year. This - and boys 13 It is injected

for 2 and 6 months. Location, vaccine at intervals injection of deltoid muscle above the arm or above the anterior region the side is the thigh. Vaccine efficacy and safety at younger ages¹⁶.

Studies have shown that Gardasil is injected into men. It is also affordable for throat and throat cancers in women, Gardasil and % Cervarix against 91% of cervical cancers and 11 Genital warts provide protection Men who have not been infected by the time of vaccination 11% to prevent genital warts and 91 in preventing precancerous lesions and cancers. The anus, mouth and throat are affected. Vaccination in men Which were infected at the time of vaccination, less effective 23 (in the study of Jura) 2019 (in young women Recipient of three or two or one dose of the vaccine Cervarix (effective against 16 and 19) equally Related to this vaccine for 2 years against HPV Provided protection after vaccination¹⁷. More than 61 million doses of vaccine have been used and no evidence of severe adverse effects vaccination has not been observed. Most complications unwanted injection site pain and swelling and erythema. In vaccines, injection site complications such as inflation and erythema are higher than the quadruple type more than 35,000 adverse reactions since mid-March 2018 Gardasil is a reported HPV vaccine in the United States. Problems with the Gardasil vaccine Includes: Destructive and inflammatory-mediated disorders immune reactions that trigger overreactions becomes safe.¹⁸ Patients may be hours after receiving the vaccine suffering from general symptoms that include headache, fatigue, palpitations heartburn, sweating, nausea and fainting and dizziness and increase the heart rate rises and these symptoms are likely by virus-like particles present in the is aroused¹⁹.

3.2 Discussion

In HPV the present study examined the role of vaccines prevention of cervical cancer. Cervical cancer uterus by performing measures such as vaccination, performed regularly diagnostic tests and having healthy sex can HPV. It can be easily controlled and controlled detection of malignant cells by the immune system inhibit and lead to the progression of cervical cancer. In case of cancer, radiotherapy and chemotherapy used, but unfortunately 51% of patients with Still out of this HPV cervical cancer in the field die of disease²⁰. New HPV to increase protection against nine vaccination is also available. Nine vaccines HPV compared to its four types against HPV 33 and 31 are much more effective and, 25, 52, type 59. It is estimated to be cost-effective to replace. Becomes. Nine new vaccines up to 19% against cancers with high degree of malignancy affects the cervix and even the vagina. The vaccine also counters as much as the current sample High-risk are effective. With HPV diseases the immunity created by the said vaccine can be found in the future expected the number of Pap smears to Greatly reduced²¹.

This study is the largest to compare cervical cancer diagnoses between women who received an HPV vaccine and those who did not. During the study period, the only HPV vaccine available in Iran was one that protected against four HPV types: HPV 6, HPV 11, HPV 16, and HPV 18. Infections with types 16 and 18 cause roughly 70% of cervical malignancies, while infections with types 6 and 11 cause 90%. The females in the research were all between the ages of 10 and 30. Between 2018 and 2020, around 528,000 of them received at least one dose of the vaccine, while the rest 1.14 million were not vaccinated. More than 80% of individuals vaccinated received the vaccination before the age of 17. During the study period, 19 vaccinated women were diagnosed with cervical cancer, compared to 538 unvaccinated women. After controlling for other factors that may influence cervical cancer risk, those figures translated into a 63 percent lower probability of being diagnosed with cervical cancer among females who had had vaccinations versus

those who had not. Many women who received the vaccine after the age of 17 were more likely to have HPV infections at the time of immunization, because the vaccine only prevents infections, not cures them. As a result, the older females were more likely to have had infections at the time of vaccination, which were thus unpreventable and could proceed to cancer.

According to studies, Gardasil vaccine can be up to 11% Protect cervical cancer and for Vaccination should be given to the vaccine before infection. 22 The study of Algonid et al. (2016) showed a double diet in controlling HPV dosing and three-dose vaccine Cervical cancers have a similar effect and use the embroidered diet costs less and in terms of. Is economical.23 In the study of Fite et al. (2015) it was shown that Nine vaccination, the current dual vaccine efficacy in the HPV vaccine Case of cervical cancers improved from 91% to 11% 95% - has forgiven. In addition, the vaccine is about 11 HPV is also associated with vaginal, vulvar and anal cancers Covers its performance and immunogenicity against 16 and 19 are similar to the dual type 11, 6 HPV HPV efficacy of this vaccine against lesions 52 and 59 are about 19%. A study by Geo et al. (2015) found that women Available in HPV vaccine vaccinated against strains are less infected, but infection with strains High-risk non-vaccine in HPV. These people are more common.²⁴ Along with the benefits of using this vaccine, concerns continue about the side effects of this vaccine. In a study by Boveret et al., 2016, two main concerns about vaccine administration 21% and suspected / related side effects 6 HPV The efficacy of this vaccine was described in the study of Fontaine and Associates (2015) to assess coverage vaccinations were performed, it was determined according to Concerns raised in France about tolls Vaccination coverage, HPV side vaccine 26% in / among 16-year-old girls with complete 5 HPV 19% in the first quarter of 2012 first quarter of 2111 to 6 Decreased²⁵.

V. Conclusion

Genital area, the basis of HPV infection prevention Constitutes recent studies. With the help of this vaccine Many precancerous and malignant lesions of the genital area Women are preventable. Screening program for Preventing cervical cancer is important but further research in this field and vaccination It is processing. Training and awareness against HPV community members play an important role in success and collective screening The community and timely vaccination will have. However, since in our country cervical cancer. The uterus is the second most common cancer among women It is necessary to take steps to promote community health Removed and one of the important measures in the field of prevention Cervical cancer performed vaccination before infection and the occurrence of infection.

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