**Review**

**Keys to Successful Education for Patients with Genital Warts with Emphasis on the Presenting Male Patient**

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Genital warts (condyloma acuminatum) are the clinical manifestations of the Human papillomavirus (HPV) type 6 and 11. HPV is the most common sexually transmitted infection in the United States and genital warts are sexually acquired low-risk strains of HPV. Although genital warts are not a life-threatening condition, they can be a cause of morbidity and psychosocial distress for patients and their sexual partners. Since genital warts are common in clinical practice with men predominantly presenting to the dermatology clinic, providers are given an important window for treatment, compassionate education with the possibility of vaccination discussion. This article will provide comprehensive guidance and a patient question/answer template to better assist these visits in order to facilitate broader conversations around HPV and destigmatize genital warts.

**INTRODUCTION**

Genital warts (condyloma acuminatum) are very common in clinical practice and are a manifestation of specific types of HPV (human papillomavirus) infection. Few diseases in dermatology can cause as much psychosocial distress as genital warts. Since the majority of patients presenting to dermatology with warts on the genitals are men, this discussion will focus on that patient population. Much of the information presented may apply to female patients and men with anal warts as well. A genital wart visit is usually an embarrassing visit for the patient, and oftentimes an uncomfortable one for the provider as well. This article will focus on teaching providers the key facts about etiology, transmission, and prevention and provide guidance for answering your patients’ questions and concerns.

**UNDERSTANDING THE PSYCHOSOCIAL BURDEN OF GENITAL WARTS**

We are familiar with the psychosocial burden of diseases like acne and psoriasis. Genital warts have the familiar burden of negative self-perception and self-esteem. However, because it is a sexually transmitted infection (STI), the negative impact reaches into more aspects of their lives. Patients often consider genital warts a stigmatizing STI but in fact, genital warts are the most common sexually transmitted infection (STI) and a clinical symptom of certain types of HPV. HPV is the most common STI in the United States with 80% of women acquiring the infection by the age of 50 and 2 in 5 people acquiring HPV in their lifetime.¹

When a patient is presented with a diagnosis of genital warts, it may bring distressing concerns over cosmetic appearance, personal health, stigmatization, and sexual relationships. Navigating sexual relations with genital warts can pose many stressful challenges to these patients. Uncertainty over the source of the infections can often lead to worries about infidelity and the general feeling that, if you have contracted genital warts, someone in the relationship has done something wrong. Patients are unsure how to explain this diagnosis to their partner and are concerned with the potential of HPV to cause cancer in themselves or their partners. Fear of transmission and embarrassment negatively impact the patient’s sex life. There is also uncertainty around treatment effectiveness, treatment duration, scarring, and worries about recurrence.

There are many ways genital warts can put stress on a patient and their personal relationships but having a knowledgeable and compassionate provider can help ease the psychosocial burdens of genital warts and facilitate honest communication between provider, patient, and partner.

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KEY FACTS ON HPV FOR PROVIDERS & PATIENT EDUCATION

The patient visit for genital warts typically revolves around treatment options. This may be appropriate for an uncomplicated case or with a patient who has had genital warts before. For the first-time patient presenting with genital warts, they may feel embarrassed; suffer from negative self-perception; and have disrupted sex, love, and social lives. Most have some burning questions that they may not have the courage to ask. Stigmatization can be drastically reduced once patients know that genital warts are common. Regardless of treatment method, patient education about the etiology and transmission of warts are essential components of management. Below are some key facts about genital warts, starting with perhaps the most important one. This simple statement of a key fact can help many sufferers of genital warts feel a reduced stigmatization.

Etiology. There are over 100 types of HPV that can cause clinical wart manifestations that people recognize, such as common warts on hands and feet in children and adults. HPV can also cause warts on genitals and other types are asymptomatic. Of those, 20 HPV types are classified as “oncogenic” or “high risk” because of their association with cervical, throat, anal, and other anogenital cancers with HPV types 16 and 18 being the most common high-risk HPV types. Seventy percent of cervical cancers are caused by high-risk HPV.2 Genital warts are growth lesions that can occur in the anogenital areas of men and women. More than 90% of genital warts are caused by HPV types 6 and 11, which are considered low risk. They are not linked to cervical cancer and rarely have cancer potential, although rare cases have been reported in those that are immunocompromised (e.g., patients with human immunodeficiency virus [HIV]).³

Transmission. Genital warts are primarily acquired through direct skin-to-skin sexual contact with an infected individual. Infected individuals can have HPV without clinical manifestations of warts. While it can be transmitted via non-penetrative sex it is extremely rare.⁴ Most HPV infections are acquired within the first years of sexual activity and risk of infection is proportionally related to the number of sexual partners. The lifetime probability of acquiring HPV (with or without progression to genital warts) with at least one sex partner is 91.5% for men and 84.6% for women.⁵

Prognosis. While there is no definitive cure for HPV, 90% of HPV infections will clear within two years. It is possible for a latency period to occur months to years later where it is suppressed to levels below what the polymerase chain reaction (PCR) tests can measure. Removing visible warts does not necessarily reduce the transmission of the underlying HPV infection, although 90% of HPV infections will spontaneously resolve in 18 to 24 months.³

Prevention. There are three vaccines approved by the United States Food and Drug Administration (FDA) for use in prevention of certain strains of HPV: Quadrivalent HPV vaccine Gardasil (Merck and Co., Kenilworth, NJ, USA), nine-valent vaccine, Gardasil 9 (Merck & Co., Kenilworth, NJ, USA), and bivalent HPV vaccine, Cervarix (GSK, Brentford, UK). It is recommended to get fully vaccinated before potential exposure to be effective.

The first vaccine, Gardasil, was approved in 2006 but Gardasil-9 is currently the only vaccine being distributed in the United States as it covers a larger number of HPV strain types. The strains covered include 6 and 11, which are low-risk, and 16, 18, 31, 53, 45, 52, and 58, which are considered the common high risk “oncogenic” HPV types.³ HPV vaccination is preventative and recommended before sexual activity in order to protect against HPV. It is also recommended for patients 9 to 26 years of age to be given in a series of three doses. Some adults 27 to 45 years of age may decide to get an HPV vaccine after speaking with their healthcare provider about their risk for new HPV infections and the possible benefits of vaccination.⁶ Gardasil-9 is 99% effective at preventing high-risk HPV types 16 and 18, which are known to cause cervical cancer, and equally effective at preventing HPV low-risk types 6 and 11 when given to HPV-naive individuals. While it is recommended as preventative and given before initiating first sexual activity, studies have shown it can reduce a significant number of infections when given to those with prior HPV exposure. Currently, the duration of protection with Gardasil-9 vaccine is five years but its duration beyond that is not yet known or studied.⁷ In addition to its efficacy against the nine HPV subtypes for which it is formulated, data have shown cross protection against other viral subtypes since the HPV family of viruses share many proteins.

COMMON QUESTIONS ABOUT GENITAL WARTS AND SUGGESTED RESPONSES

Due to the high psychosocial burden of genital warts, sufferers often have questions, and they need them answered by their healthcare providers correctly and confidently. After a provider has learned the key facts about HPV and genital warts, they can proceed with answering common patient questions with more expertise.

1) HOW DID I GET GENITAL WARTS?

Genital warts are caused by specific types of HPV that are considered low risk, meaning they do not cause long-term health problems like cancer but are considered a cosmetic nuisance. Usually, genital warts are contracted via sexual penetrative interactions (vaginal and anal). Acquisition during non penetrative sexual interaction is rare.

2) WHAT IS THE RISK OF HPV TRANSMISSION?

The risk of HPV transmission is very high (1.6 sexual interactions are enough to get the infection). The infection is very common and the vast majority of people have the virus during their lifetime.
3) MY PARTNER HAS NO SYMPTOMS, DO THEY HAVE GENITAL WARTS?

A large proportion of HPV infections are without noticeable symptoms; most individuals are unaware that they have HPV and can unknowingly transmit the virus to others through direct skin-to-skin sexual contact. Warts are a recognized symptom of genital HPV infections. About 90% of those exposed who contract HPV will not develop genital warts. Only about 10% of those who are infected will transmit the virus.3

4) I HAD A COMPLETE STI SCREENING, AND IT WAS NORMAL? WHY DO I HAVE GENITAL WARTS?

STI screenings are done to evaluate for many STIs including gonorrhea, chlamydia, HIV, and syphilis, however, there is currently no routine testing done for HPV in men. Because there is no routine testing for men, many men are unaware of their HPV status and large proportions of HPV infections are asymptomatic. Some healthcare providers offer anal Pap tests to men who may be at greater risk for anal cancer due to HPV. This includes men with HIV or men who receive anal sex.

5) HOW CAN MY FEMALE PARTNER GET CHECKED FOR GENITAL WARTS?

Genital warts in females may be hidden inside the vagina and anus, outside the vagina and anus and surrounding skin and in the cervix. If a visible wart is not found, further gynecological testing can be done with a routine Pap smear.

6) MY FEMALE PARTNER’S PAP SMEAR WAS NORMAL, DOES THAT MEAN SHE DOESN’T HAVE HPV?

Not necessarily. Routine Pap smears are to detect cervical changes which may be due to other infections, HPV, or menopause but it does not specifically detect HPV infection itself. Some cervical changes may not be shown yet or may never appear as HPV can be asymptomatic. If the Pap returns abnormal results, her provider will further order HPV testing. Since HPV is so common, many providers will not order an HPV test under the age of 30 since most women will clear their HPV infection in a few years. HPV tests do not test for all HPV tests and are primarily to test for high-risk HPV types (types 16, 18, 31, and 45). Since genital warts are caused by low-risk HPV types 6 & 11, HPV testing usually returns as negative in cases of genital warts. There are cases of genital warts found externally in women with normal Pap smears that were only further detected through colposcopy.6 Since genital wart is considered a cosmetic nuisance and low risk, a woman can be rest assured that if her Pap smear is normal and her HPV test is negative, she does not currently have a risk for cervical cancer.9

7) WILL I DEVELOP CANCER?

No, genital warts are not related to cancer. Genital warts are caused by certain types of low-risk HPV; the other types of high-risk HPV cause cancer.3

8) IS THERE A TREATMENT?

Genital warts are considered a cosmetic nuisance and a low-risk type of HPV that does not lead to cancer. Providers can discuss the modalities and the limitations of treatment, explaining this will not eradicate the virus itself but eradicate the appearance of warts.

9) WHAT WILL INCREASE MY RISK OF DEVELOPING GENITAL WARTS?

Smoking, unprotected sex, and an increased number of sexual partners increase the risk of developing genital warts. Condom usage can decrease the risk of transmission, but it is not 100%. Recurrence rates depend on the patient’s immune status, number of inoculations (i.e., sexual frequency with an infected partner), use of condoms, and viral load.5

10) HOW LONG WILL I HAVE GENITAL WARTS?

Genital warts can recur several times even with appropriate treatment. Most should clear within three months of treatment. Treatment is to eradicate the cosmetic appearance of genital warts, not to clear the HPV infection itself, however, the HPV infection typically clears within 18 to 24 months.

11) IS THIS THE END OF MY SEX LIFE?

Reassure the patient that this is not the case and HPV infections are the most common STD.

12) WHEN CAN I START HAVING SEX AGAIN?

When there are no visible HPV lesions and your partner has been examined and is clear of genital warts. Viral load of genital warts and transmission are higher when visible lesions are present.10 Once warts have resolved, it is not clear that productive infection persists or that partners are infectious. Genital warts have been known to incubate for years and advising abstinence for that long is not desirable or practical given the low-risk nature of HPV. The genital wart patient should also be advised to regularly inspect themselves as new lesions may arise and continue to spread.

13) DID MY PARTNER CHEAT ON ME?

This is a common question as development of an STI may implicate infidelity. This is difficult to answer and provides little value for providers to label their patient’s partners as cheaters. There may be instances of sexual abuse of which providers are not aware. Our answer to this question should stick to the medical facts and the personal questions of infidelity should be worked out between the patients and their partners. Around 80% of sexually active adults develop HPV
in their lifetime and due to long incubation periods, it is not considered a traceable STI.

14) WHAT DO I TELL MY PARTNER?

Do I need to tell future partners? The stigma of genital warts (infidelity, poor hygiene, feelings that you have done something wrong) makes this a difficult conversation for the patient to have with their partner. Because genital HPV infection is so common among people who have been sexually active and because the duration of infectivity is unknown, the value of disclosing a previous diagnosis of genital warts to future partners is unclear. In the discretion of honest relationships, patients may initiate conversation with future partners by stating that they have had genital warts in their lifetime, which is caused by specific types of HPV from a sexual encounter at any point in their lifetime. Genital warts can be a cosmetic nuisance, but it does not cause long-term health issues like other types of HPV that can cause cancer. For reassurance, recommend your partners be examined for genital warts and recommend routine Pap smear tests for both women and men that are appropriate for their risk factors.

FINAL NOTES ON COMPREHENSIVE PATIENT CARE

Genital warts are very common in clinical practice and a typical visit is generally focused on treatment. While genital warts themselves do not cause long-term health problems due to their low-risk HPV status, a first-time visit can provide an opportune moment for healthcare providers to educate on HPV, the long-term consequences of certain HPV types that lead to cancer, and prevention by vaccination. Providers can educate patients about the importance of understanding HPV and the HPV vaccine (Gardisal-9) as it can prevent a variety of genital cancers and other non-anogenital cancers. Case reports and small studies have even found the vaccine to be beneficial in common warts that affect children despite the vaccine being formulated for specific types of HPV, further suggesting cross protection against other viral subtypes not in the vaccine. Providing genital warts patients with a full focused exam on etiology, treatment, and prevention can make future treatment visits more comfortable for the patients and providers and help reduce stigma surrounding genital warts.

DISCLOSURES

Nhung Ho, PA-C reports no potential conflicts of interest, financial or otherwise, relating to the content of this article. Steven Leon, MS, PA-C, is the clinical consultant for Wart-PEEL, MedCara Pharmaceuticals, LLC, in Conrad, Iowa.

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