American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™
Maryland Chapter

The HPV Series: The Human Papillomavirus (HPV) and Genital Warts
Issue 5: April 28, 2014

Through financial support from The Department of Health and Mental Health (DHMH) it is our pleasure to share with you a series dedicated to the HPV vaccine in the pediatric setting. Each issue will present a literature review for the provider with questions and answers on key issues for parents and caretakers. The AAP and CDC have both recommended vaccination starting at eleven to twelve years of age for both boys and girls; however, the vaccine still remains poorly utilized. [1]

The last two issues of *The HPV Series* focused on the role of human papillomavirus in causing cancer. This issue is focused on HPV infection and genital warts.

Anogenital warts, or condylomata acuminata, are small fleshy lesions that range in size from several millimeters to multiple centimeters and have a cauliflower-like texture. They are painless lesions which differentiate them from MANY other sexually transmitted infections. They may, however, still; burn, itch, or bleed. Anogenital warts are often undetected and may cure spontaneously. Treatment often involves topical medicine or referral to a specialist. Prevention involves sexual abstinence, monogamous relationships, delayed sexual debut, minimizing the number of sex partners and administration of the HPV vaccination. (1)

Estimating the exact frequency for genital warts is difficult as many lesions, especially in men, are undiagnosed. Research that has emerged out of population studies of US STD clinics, WHICH indicate that about 1% of sexually active adolescents and adults have clinically apparent genital warts. More than 90% of cases of anogenital warts are associated with the low-risk HPV types 6 and 11. (2)

The same two strains 6 and 11 can also be transmitted vertically during childbirth and result in rare laryngeal lesions resulting in childhood respiratory papillomatosis. This condition presents with hoarseness, voice changes, changes in cry and may progress to respiratory obstruction. (1) (Image 1: see right)

The effects of HPV vaccination on genital warts are easier to study in comparison to cervical cancer because the incubation period between exposure and symptomatic genital warts is shorter. One 2013 study in a Swedish population was able to use a national database. FOR A population of over 2 million patients they were able to demonstrate the effectiveness of the vaccination IN decreasing incidence of genital warts. Key points of their research also illustrate ideal timing of vaccination. They showed that in patients who received the series before age of 14 effectiveness was close to 93%, for those age 14 to 16 effectiveness was 80%, for those 17 to 19 effectiveness was 71%, and for those who were between the age of 20-22 at vaccination effectiveness was only 48%. (3) This data underscores the importance of early vaccination.

The next issue of the HPV series will focus on literature published about the controversial aspect of HPV vaccination and increased sexual activity.

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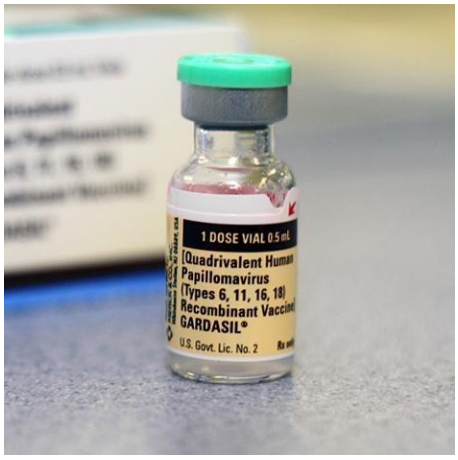
[1] The Author: Theodore Wilson MD is working with the Maryland AAP chapter. He has no financial conflicts of interest or investments in any products discussed. Reproduction is permitted.

This can be printed as a hand-out for parents to answer their questions.

<u>The HPV Series:</u> Family questions about the human papillomavirus (HPV) and Genital Warts



Are genital warts the same as other warts?

Genital warts and plantar warts are caused by similar strains of HPV. There are many strains that can cause warts in general though two strains, 6 and 11, cause over 90% of genital warts.

How are genital warts spread?

Genital warts are spread by sexual contact. Often warts appear as small bumps and may be unknown to either partner prior to contact. Condoms have been shown to decrease the spread of infection. However, they are also one of the few sexually transmitted diseases that can be spread despite condom use.

How common are genital warts?

Research shows that about 1% of adolescents have genital warts large enough for patients to seek medical care. There are many more individuals with genital warts who have not sought care because genital warts can be very small and are also painless. It is also a concern that many individuals are embarrassed about seeking treatment or do not even know they are infected.

Who is at most risk for genital warts?

Individuals who have poor or compromised immune systems are at high risk. Additionally, men who have sex with men are also at high risk of having genital warts. These two groups in particularly encouraged to receive vaccination.

How are genital warts treated?

There are some medications that can treat genital warts and many cases may resolve over time. However, recurrent infections are also common and may need multiple and expensive surgeries to remove sores. The best treatment is prevention with vaccination against the two strains of HPV which cause up to 90% of all genital warts.

References

(1) CDC Red Book -Genital Warts" American Academy of Pediatrics. Red Book: 2012 Report of the Committee on Infectious Diseases. Pickering LK, ed. 29th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2012. http://aapredbook.aappublications.org

(2) CDC Pink Book "Human Papillomavirus Epidemiology and Prevention of Vaccine-Preventable Diseases The Pink Book: Course Textbook - 12th Edition Second Printing (May 2012) http://www.cdc.gov/vaccines/pubs/pinkbook/hpv.html

(3) Leval et al. "Quadrivalent Human Papillomavirus vaccine effectiveness: A Swedish National Cohort Study" J. Natl Cancer Int. Apr 3, 2013; 105(7): 489-474 http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3614506

(4) Image 1: "Laryngeal Papillomas" American Academy of Pediatrics. *Red Book: 2012 Report of the Committee on Infectious Diseases.* Pickering LK, ed. 29th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2012. Copyright AAP. May be used for teaching. http://aapredbook.aappublications.org/content/1/SEC131/SEC226/F1389.expansion.html

(5) Image 2: "Gardisil vaccine and box" Photographer: Jan Christian; Feb 13th 2007 Creative Commons Licensing. Reproduction is permitted with attribution.