



HPV AND THE PAP SMEAR

HPV stands for Human Papilloma Virus, and it is this virus that has been linked to cervical cancer. The virus typically infects cells found not only around the opening of the cervix, but also cells found in the anus, vulva, vagina, penis, and throat. The virus is identified by the gene types, and to date there are about 130 HPV types. It is further subdivided into high- or low-risk types depending upon their ability to become cancerous. In the female, genital infection can occur with about 30-40 different types of the HPV. The low-risk types do not cause cancer and cause the growth of warts that are typically identified by its hard brownish cauliflower-like appearance. These growths are typically caused by the most common types called HPV 6 & 11. The high-risk types are virtually responsible for 100% of cervical cancers, with the majority of the cancers caused by Type 16, followed by 18.

WHO IS AT RISK?

HPV is a sexually transmitted infection that affects 50-80% of women worldwide. It affects predominantly women under 25. The risks for infection include: the number of sexual partners at any given time; age at first intercourse (the younger the woman the higher the risk for infection); the number of lifetime partners; and smoking history. The older, perimenopausal and postmenopausal woman is also becoming a population at risk. The assumption is that the thinner and more fragile vaginal wall typically found in this population makes

it more easily bruised and small cuts that result during intercourse make it easier for the virus to be transmitted. Condoms offer some protection but it need to be used regularly and consistently to achieve about 60% protection against infection. A circumcised partner is also protective.

HPV is highly infectious with the incubation time (that is the time from exposure to showing clinical signs of the infection) of 3 weeks to 8 months. The majority of individuals who develop the warts do so about 2-3 months after being exposed. Of those exposed, about 10-30% can naturally get rid of the virus from their system. About 20% of infected women and about 6% of infected men will unfortunately show signs of the virus for life. Infection with the high-risk types typically follow the same pattern of developing clinical signs of the infection, but may take 12-18 months to spontaneously clear. Of those who are unable to clear the virus, 10-20% will have a higher risk of developing cervical cancer.

HPV and CANCER SCREENING:

HPV testing at the time of the “PAP smear” is highly effective screening test for cervical cancer. In our office, HPV testing is recommended to all, and should be done routinely regardless of marital status, prior negative test, or sexual orientation. As Infection with the virus doesn’t require vaginal or anal penetration women who have not become “sexually active” in the traditional sense should consult with their gynecologist to consider the appropriateness of testing. Oral sex has become the #1 cause for throat cancer associated with the HPV.

How often to perform the tests have become subject to discussion. Those in long term monogamous relationships who test negative for the HPV and have normal cervical cells on the Pap smear, may consider retesting every 2-3 years. All others should continue with yearly testing because the infection can persist for a lifetime, and most often infected partners may be unaware that they carry the virus. Men have a significant role in the transmission of the virus to women, but a true screening program for men so far is not recommended. For males, there is no HPV-related disease that is 100% as it is for women. Penile and anal cancers remain rare. Our office offers testing of male partners upon request. Perhaps knowing your partner is HPV positive may help enhance safe-sex practices.

Although evidences do indicate that HPV infection cause cervical cancer, we know that the presence of the virus alone is not enough to cause cervical cancer. As in most cancers, there are implicating personal and environmental factors that contribute to the clinical development of cancer. I had one pregnant woman who I diagnosed early cervical cancer during her pregnancy and had the diagnosis confirmed by a gynecologist oncologist. She refused medical advice and instead decided to optimize her health and strengthen her immune system. Rather it was the pregnancy itself, the various lifestyle changes she made or sheer luck, I confirmed she was cancer free after the birth and she has remained cancer free.

THE HPV VACCINE:

The available vaccines target low-risk type HPV 6 & 11 and the high-risk types HPV 16 & 18 and are recommended for girls/women age 12-26. Currently the 2 vaccines available are Gardasil & Cervarix. Each vaccine program consists of 3 injections given over a 6- month period and is expected to be protective against the development of genital warts and reduce cervical cancer by about 70%. Although the vaccines are specific for the types mentioned (6, 11, 16, 18), studies are showing that they may offer cross protection against other types as well. Continuing research is being done on the inclusion of males in the HPV vaccination programs. It is anticipated that male inclusion in the vaccination program will ultimately reduce the overall transmission of HPV in men & women. It will take years before the true benefits of the vaccination programs are known. Screening for cervical cancer is recommended for those vaccinated.

TESTING POSITIVE:

Cervical cancer screening is the most effective cancer screening program available. Currently the cytology (Pap smear) is obtained at the same time with the HPV typing in most offices. However, HPV testing alone is considered the most reliable screening test for cervical cancer.

For those who test HPV positive but have normal Pap smear results, retesting in 6 months is usually recommended in my office. The person's sexual history is evaluated as well to determine if other surveillances need to be undertaken.

If you test HPV positive, and have abnormal cells you would need to work closely with your gynecologist. Colposcopy is usually recommended. It is a specialized microscope that allows a close up evaluation of the cervix. It is minimally uncomfortable, but if abnormal areas of the cervix are seen, biopsies are done and the sample is sent to a lab for evaluation. The cervical cells are then evaluated on the severity of the changes seen under the microscope, and treatments are offered based on those changes seen.

The cervical cells obtained during the Colposcopy evaluation are compared to normal cells. If the cells are not normal, they are then graded by the degree of changes that is referred to as "dysplasia". This category include ASCUS (not normal, but undetermined or uncategorized), CIN1 (mild changes), CIN2 (moderate changes), CIN3 (high or severe changes), CIS (early and localized cancer) and ICC (invasive cervical cancer). Those cells that are confirmed as ASCUS or CIN1 have about an 85% chance of spontaneously clearing and can be monitored closely in certain women. If treatment is needed for persistent infection, cryotherapy or "freezing" can be done successfully. CIN2 or higher usually will require treatment that can include laser, or removal of a small part of the cervix so that cell rejuvenation can result in healthier new growth of that area of the cervix. The surgery performed on the cervix can include "LOOP" or "LEEP", or cone biopsy, or vaginal hysterectomy. The diagnosis of ICC or invasive cancer requires radical hysterectomy and referral to a gynecologic oncologist.

In this day and age, no American should die of cervical cancer given the effectiveness of our screening program but unfortunately, economic disparity to health care and the additional burden placed by the current recession make this the 2nd most common cancer diagnosed in American women.