Human papillomavirus provides an interesting dichotomy in men vs. women. The virus is a potentially cancer-causing virus when it infects women.\textsuperscript{1} In men, however, while the HPV we see is the “bad” HPV and thus more likely to be the cancer-causing type, it does not generally cause cancer in the men who are infected.\textsuperscript{2}

Circumcision will reduce the risk of infection with human immunodeficiency virus, HPV, and herpes simplex virus for the individual who is circumcised.\textsuperscript{3} And circumcised men are less likely to have partners who become infected with cancer-causing HPV.\textsuperscript{4}

So, if we are circumcising men at least in part to prevent them from becoming infected or infecting others with certain sexually transmitted diseases, should we vaccinate men against HPV for the same reason? And can we explain why circumcision prevents the spread of infection?

It is clear that behaviors of men and women can affect the transmission and conversion of HPV into a cancer-causing virus.\textsuperscript{5} But we aren’t clear on all of the specific behaviors that contribute to disease activation, and this complicates the answers to such questions.

Also, while vaccines have been considered one of the most cost-effective methods of treating disease, that distinction is not as strong as it used to be. With the price of vaccines continually increasing, their cost effectiveness is no longer as clear as it once was.\textsuperscript{6}

Circumcision considerations

Newborn circumcision is the most common surgical procedure in the United States,\textsuperscript{7} and its prevalence has drastically increased over the past 20 years. Male circumcision is, of course, the surgical removal of the foreskin of the penis, and the decision to do this is dependent on many factors: perceived necessity, parental or personal preference, and intangibles that can include religious and cosmetic reasons. There are hygienic concerns as well.

Current recommendations regarding circumcision favor its practice largely based on the premise of hygiene. Among the benefit considerations of circumcision are lower rates of urinary tract infections, penile cancers, penile inflammation, penile dermatoses and sexually transmitted diseases.
**HPV infection in men**

Men are infected with HPV at the same rate as women, but it doesn’t cause the same kind of serious problems. Even penile cancer will be HPV-negative 50% of the time.

Current recommendations for the prevention of HPV transmission and cervical dysplasia include: sexual abstinence; monogamy with known partner status; male circumcision; and, most recently, vaccination against HPV in women. While the HPV vaccine would be effective in men, the benefit of using it is unclear unless the man falls into a high-risk group. Also, it is unclear if HPV infection is focused mainly in the glans and corona region or on the shaft of the penis. There is no information on migration of the virus, natural history of HPV in men, or transmission between men and those with whom they have sex. If the virus lives in the urethra, then the benefit of circumcision may not be as apparent as we would otherwise expect.

**Future direction**

The natural history of the HPV virus and what causes it to become malignant is an unanswered question that should drive our decisions regarding vaccination and circumcision. In the absence of that information, the vaccination and circumcision decisions will remain personal and based on each individual’s personal criteria rather than scientific data.

**References**


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