

Determinants of Prevalence, Acquisition, and Persistence of Human Papillomavirus in Healthy Mexican Military Men

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Abstract

Background: Human papillomavirus (HPV) infection is sexually transmitted, but the nature of the infection in males is poorly understood. We sought to identify determinants of HPV infection, acquisition, and persistence in 1,030 healthy military men in Mexico.

Methods: From July 2000 to July 2003, trained interviewers administered a questionnaire, conducted a genital examination, and collected samples. The presence of multiple HPV types in genital cells from the urethra, urethral meatus, scrotum, penile shaft, and coronal sulcus was evaluated. At baseline 1,030 participants and after 1-year follow-up 336 individuals were sampled using a highly sensitive DNA reverse blot strip assay.

Results: HPV prevalence was 44.6%; infection with high-risk types was observed in 34.8% participants and 51.1% were multiply infected. After 1-year follow-up, 165 men remained free of HPV, 68 cleared their infection, 45

acquired one, and 37 remained infected with the same HPV type. The period prevalence was 50.9%, the incidence rate was 17.9/1,000 men-months [95% confidence interval (95% CI), 13.0-23.9], clearance was 54%, and persistence was 29.4%. At baseline, the number of partners before age 20 years, a history of a sexually transmitted disease, and the presence of condilomas significantly increased the association with HPV infection. Having anal intercourse with males was associated with the risk of acquiring a HPV infection (odds ratio, 5.2; 95% CI, 1.2-23). The odds ratio for persistent infection was 0.10 (95% CI, 0-0.87) in men who reported being circumcised compared with those who did not.

Conclusions: High-risk sexual behavior increases the risk of HPV infection in males, whereas circumcision may lower the risk of persistence. (Cancer Epidemiol Biomarkers Prev 2005;14(7):1710-6)