

Frequency of antibodies against E4 and E7 from human papillomavirus type 16 in Mexican soldiers

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Received December 15, 2005; accepted June 28, 2006
Published online August 3, 2006 © Springer-Verlag 2006

Summary. The high prevalence of HPV in men's genitalia and the low frequency of virus-associated lesions gave rise to questions on the influence of infection-site on the HPV antibody profile. In a cross-sectional study, HPV infection in penis and urethra, and serum antibodies against HPV-16 E4 and E7 proteins were evaluated in 288 Mexican soldiers. The results showed that HPV prevalence was 31% (51% in penis, 11% in urethra and 38% in both sites), while 47% were multiple infections. Overall, seroprevalence was 13% for anti-E4 antibodies and 6% for anti-E7. However, the highest prevalence of anti-E4 antibodies was observed in men with HPV infection in urethra (30%), while for E7 antibodies, the highest prevalence (10%) was found in men who tested positive for HPV in penis. The prevalence of IgG and IgA anti-E4 was related to HPV-16 urethral infection, while detection of HPV-16 in penis was related to IgG anti-E7 prevalence. In conclusion, the high-risk sexual behavior observed in this population might be responsible for high HPV prevalence and multiple infections. However, the seroprevalence of E4 and E7 was similar to that observed in healthy Mexican women. These results suggest that the humoral immune response against HPV infection in men differs, depending on the site of infection.