

Abstract

Determinants for Genital Human Papillomavirus (HPV) Infection in Tunisian Women with Normal Pap smear: Are There Different Risk Profiles for Oncogenic and Nononcogenic HPV Types?

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Abstract

Background: Most studies of risk factors for HPV infection have focused on overall HPV positivity and have not examined determinants for high-risk and low-risk HPV types separately.

Objective: To evaluate the prevalence and type distribution of high-risk and low-risk HPV infection and to describe the risk factors associated with different profiles in Tunisia.

Methods: We studied risk determinants for genital HPV infection in a randomly sample of women aged 18 years and older with normal cervical cytology in Tunisia during 2014. All women had a personal interview, a Pap smear, and cervical swabs for HPV DNA detection using a PCR technique. Information on sociodemographic, reproductive, lifestyle characteristics, and health-seeking behaviors was collected.

Results: The overall HPV prevalence was 7.5% (IC95% [5.9%-9.0%]). Prevalence of HRHPV was 4.8% (IC95% [3.7%-6.2%]) and LRHPV 3.8% (IC95% [2.8%-4.8%]). Of HPV-positive women, 64.0% (IC95% [53.8%-74.4%]) had high oncogenic HPV types, and 45.3% (IC95% [33.0%-54.8%]) had low oncogenic HPV types. Simple infection was predominant within 76.6% (IC95% [66.3%-83.9%]) of positive women. Younger age and lifetime measures of sexual activity (notably, number of partners) were the main risk factors for the oncogenic HPV types. A statistically increase risk was found in women whose partners had multiple sex partners. Furthermore, a previous sexual infection was associated with the high-risk HPV types. HR-HPV infection risk was observed in women aged less than 30 years, who were smokers, divorced/separated and having a high educational level. In contrast, the most important determinants for nononcogenic HPV infection were contraceptive variables related to the physical protection of the cervix and low standard of living.

Conclusions: The results indicate that different risk profiles exist for infections with different HPV groups with high-risk types being the most common types detected. HR-HPV positivity was associated with social determinants, behavioral and sexual characteristics. These results should assist in designing strategies for control of cervical cancer targeting at risk population.

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