



INVITED SPEAKER PRESENTATION

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HIV/HPV coinfection: state-of-the-art

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Aim

The risk of HPV-related cancers is higher among persons with HIV/AIDS, even under HAART treatment. This data prompted us to analyse HPV distribution, persistence and changes in HPV multiplicity of infections before and during antiretroviral treatment.

Materials and methods

Prevalence and persistence of mucosal HPV genotypes and HPV16 variants were analysed in a prospective cohort of HIV-positive and HIV-negative Italian women.

Results

HIV-positive women were more likely than HIV-negative women to be infected by HPV at the initial examination (39.3 vs 13.9%, $P < 0.001$) and to have a higher period-prevalence of HPV infection over a 3-year follow-up (43.8% vs 17.4%, $P < 0.001$), regardless of CD4+ cell counts and anti-retroviral therapy. 'High-risk' and 'probable high-risk' HPVs (types 16, 18, 31, 33, 35, 45, 52, 58 and 66), among the 20 different viral genotypes identified, were predominant in HIV-positive (33.9%) compared with HIV-negative (13.9%) women. Among HIV-infected women, with normal cytology as well as with SIL of any grade, the most common genotypes were HPV16 followed by HPV81, -58, -72, -33 and -62. HPV16 isolates from 18 HIV-positive and eight HIV-negative women were classified into variant lineages based on sequencing analysis of E6 and E7 genes and the long control region. Whilst the HPV16 G350 European variant was prevalent in both HIV-positive (10.7%) and -negative women (3.5%), HPV16 African 2 variant was only detected in HIV-positive women (3.6%), suggesting different sexual mixing behaviours.

Discussion

The high prevalence of HPV-related lesions in our cohort study, of HIV-positive patients under HAART-treatment, is consistent with the reported high standardized incidence rates (SIRs) of HPV-related in situ cervical (SIR 8.9, 95% CI = 8.0 to 9.9) and anal cancers (SIR 68.6, 95% CI = 59.7 to 78.4) as well as for invasive oropharyngeal (SIR 1.6, 95% CI = 1.2 to 2.1) and anal cancers (SIR 34.6, 95% CI = 30.8 to 38.8). The high prevalence of uncommon viral genotypes and HPV16 variants in HIV-positive women underscores the need to target a wide range of HPV types in cervical screening of HIV-positive women.

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