

HPV virus types in women with invasive cervical carcinoma by HIV status in Kenya

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Abstract:

To evaluate the fraction of invasive cervical carcinoma (ICC) that could be prevented in HIV-infected women by vaccines currently available against human papillomavirus (HPV)16 and 18, we conducted a cross-sectional study in women with ICC in Nairobi, Kenya. Fifty-one HIV-positive women were frequency-matched by age to 153 HIV-negative women. Cervical cells were tested for HPV DNA using polymerase chain reaction-based assays (SPF10-INNO-LiPA). Comparisons were adjusted for multiplicity of HPV types. As expected, multiple-type infections were much more frequent in HIV-positive (37.2%) than in HIV-negative (13.7%) women, but the distribution of HPV types was similar. HPV16 was detected in 41.2% versus 43.8% and HPV16 and/or 18 in 64.7% versus 60.1% of HIV-positive versus HIV-negative women, respectively. The only differences of borderline statistical significance were an excess of HPV52 (19.6% versus 5.2%) and a lack of HPV45 (7.8% versus 17.0%) in HIV-positive women compared to HIV-negative women, respectively. We have been able to assess an unprecedented number of ICCs in HIV-positive women, but as we did not know the age of HIV acquisition, we cannot exclude that it had occurred too late in life to affect the type of HPV involved in cervical carcinogenesis. However, if our findings were confirmed, they would suggest that the efficacy of current vaccines against HPV16 and 18 to prevent ICC is similar in HIV-positive and HIV-negative women, provided vaccination is administered before sexual debut, as recommended