

Prevalence and types of human papillomavirus (HPV) in HIV-positive females in Eastern India

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Virtually, all cervical cancers are caused by HPV infections, with just two HPV types, HPV-16 and HPV-18, responsible for about 70% of all cases. HIV-infected women represent one of the highest risk groups for the development, progression, and recurrence of HPV induced cervical precursor lesions and cervical cancer. The aim of this randomized case control study was to evaluate the prevalence of HPVs in HIV-positive females and in HIV-negative females in Eastern India. Pap smear was taken from HIV-positive females (cases) attending antiretroviral therapy (ART) centre and HIV-negative females (controls) attending gynaecology O.P.D. from December 2010 to June 2012. Detection and typing of HPV was done by polymerase chain reaction using consensus primers followed by PCR using type specific primers and sequencing. Cervical scrapes were taken from 216 cases and 76 controls. The HPV was prevalent in 58 (26.85%) cases and in only one control (1.31%). On sequencing, the following HPV types were recorded among cases: HPV-16 (31.0%), HPV-31 (15.5%), HPV-58 (15.5%), HPV-35 (13.8%), HPV-52 (8.6%), HPV-18 (3.4%), HPV-33 (3.4%), HPV-56 (3.4%), and HPV-66 (1.7%), HPV-67 (1.7%), HPV-68 (1.7%) and only one control was positive for HPV-35. In a tertiary care hospital in Eastern India the prevalence of HPV among HIV-positive females were much higher as compared to HIV- negative females attending general OPD. As most of the cases had high-risk HPV types, it is recommended that regular HPV screening should be done at the ART centre. Hence, HPV testing in HIV-positive women may help to reduce frequent cervical cancer screening.

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