

12th World Cancer Congress

July 23-25, 2018 | Moscow, Russia

Distribution of high-risk HPV genotypes in HIV-infected women of the Moscow region

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HIV-infection increases the incidence of squamous intraepithelial lesions ultimately leading to cervical cancer. This study characterized the incidence of SIL and prevalence of high carcinogenic risk types (HR-HPV) types in HIV-positive women in relation to their immune status. Cervical smears of HIV-infected (n=618) and HIV-negative (n=100) women aged 19-62 were subjected to cytological screening (BD SurePath™) and HPV16/18-specific PCR (Abbott RealTime High-Risk HPV). Of HIV(+)- women, 31% had cervical pathology: HSIL (3%), LSIL (14%), ASC-H (2%), ASC-US (12%). None had cervical cancer. Pathology was not related to immune status: women with CD4-nadir >500 and <500 cells/ul had similar frequencies of ASC-US/ASC-H/LSIL/HSIL. Positivity for HR-HPV types was high among women aged<30, and decreased with age as described. The decrease was dramatic in HIV-negative (21% in aged <30 vs 2% in aged >40 years), and milder in HIV-infected (31% in aged <30 vs 17% in aged >40) (p<0,05). Prevalence of HR-HPV types was higher among

HIV(+) than HIV(-)-women, specifically aged >30. HIV(+)-women with lesions were infected with at least one HR-HPV: HPV16 (HSIL, ASC-H) or non-HPV16 (LSIL, ASC-US). Women with CD4-nadir <500 cells/ul had highprevalence of HR-HPVs other than HPV16/18. Prevalence of lesions and positivity for HPV16/18 was equal in ART-treated and untreated. We confirm higher prevalence of HR-HPV, specifically HPV16, in HIV-infected compared to healthy women, not directly related to immunosuppression. In HIV-infected women, grieve neoplasia were strongly associated with detection of HPV16, advocating creation of therapeutic HPV16-based vaccines for HIV-infected.

Speaker Biography

Daria Podcufarova has graduated Russian State Medical University, has a specialty in medical biochemistry and is currently working at N. F. Gamaleya Federal Research Center for Epidemiology & Microbiology. She is studying the diversity of HPV types in human mucosa in norm and pathology.

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