

Risk of occurrence of multiple high-risk human papillomavirus types among Ugandan women with or without cervical cancer

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Persistent infection with high-risk (hr) human papillomavirus (HPV) types, mostly HPV16 and HPV18, is a necessary cause of cervical cancer (CC), but data on the risk of their occurrence in HIV endemic countries, is scarce. We assessed the risk of occurrence of multiple hrHPV types among Ugandan women. We conducted a case-control study at the Mulago hospital where CC cases and controls were enrolled. Serum antibodies to HPV6, 16, 18, 31, 33 and 45 were analyzed using virus like particles (VLPs) in ELISA. We observed that antibodies to any and to multiple hrHPV types were more common (68% and 43%, respectively) in the CC cases than in the controls (58% and 32%, respectively) ($p < 0.01$). The seroprevalences peaked at age 30-40 years for the controls and at age 40-50 years for the cases. Both in the cases and the controls, HPV6 seropositivity was most common, while antibodies to HPV33 were most prevalent of the hrHPV type antibodies tested. The risk of being seropositive for a non-HPV16/18 hrHPV type among women seropositive for HPV16 or HPV18 as compared to HPV16 or HPV18 seronegatives was significantly increased both in the cases and the controls. No significant differences in the risk for being seropositive for multiple hrHPV infections were observed between HIV positive/negative CC cases and controls. In conclusion, while both single and multiple hrHPV infections are more common in Ugandan CC cases than healthy controls, their risk of multiple hrHPV infections is, however, not different, probably due to the common occurrence of multiple hrHPV infections in the population.

Biography

Proscovia Bazanya Namujju completed her Ph.D. in Public Health/Epidemiology from the University of Tampere (2012) and she is a researcher at the same university and at The National Institute for Health and Welfare, Oulu, Finland. She also worked at the MRC/Uganda Virus Research Institute. Dr. Namujju is on the board of directors at the Center for Adolescent Health Uganda (CHAU) and she is also a member for the International Society of Infectious Diseases (ISID) and International Papillomavirus Society (IPVS). She has published more than 20 papers in reputable journals and she serves as *ad-hoc* reviewer for several journals.

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