

I 30. Prevalence and risk factors associated with HPV infections among women with HIV in Meru, Kenya

Celestine Kemunto^{1,2,*}, Rachael Gachogo³, Joan Simam⁴, Anthony Nyamache¹, Frank Onyambu⁴

¹Department of Biochemistry, Microbiology and Biotechnology, Kenyatta University, Nairobi, Kenya

²Centre for Molecular Biosciences and Genomics, Nairobi, Kenya

³University of Cape Town, Cape Town, South Africa

⁴Department of Medical Laboratory Sciences, Meru University of Science and Technology, Meru, Kenya

Corresponding author: ckemunto007@gmail.com

Subtheme: Health Sciences - Climate Change and Public Health; Response and Impact of environmental changes on Health.

Abstract

Cervical cancer, caused by, Human Papilloma Virus (HPV) is the leading cause of preventable deaths among women. High incidence and high mortality for cervical cancer are reported in low and middle-income countries where immunocompromised women with HIV exhibit an increased risk. We determined circulating high-risk HPV genotypes in women with HIV in Meru, Kenya and identified risk factors associated with HPV infections in a cross-sectional study of 303 women aged 18 to 64 years. Sociodemographic and clinical details were collected using a questionnaire. Cervical specimens were obtained using a self-sampling technique, followed by HPV DNA extraction and real time PCR targeting 24 high-risk genotypes with differentiation of HPV 16, 18, and 45. Data analysis was carried out in R Studio. The association between risk factors and HPV status was evaluated using the Wilcoxon rank sum test, chi-squared test, and Fisher's exact test with $p < 0.05$ considered statistically significant. Out of the 303 tested samples, 60.4% (N=183) tested positive for high risk HPV broken down as HPV 18 (36.6 %), HPV 45 (31.68 %), HPV 16 (12.20 %) and other high-risk HPV types (14.85 %). The prevalence of multiple infections with HPV 16 and 18 was 8.58% (N=26). There was a significant association between age and HPV status ($p=0.022$). The median age of HPV positivity was 38 years. In conclusion, our study reveals a high prevalence of high-risk HPV dominated by HPV 18 among women with HIV in Meru. These findings highlight the need for targeted screening programs within this population to facilitate early detection and timely interventions to prevent cervical cancer.

Keywords: HIV, HPV, Cervical cancer, timely screening, Prevention