

## ABSTRACT

**Background:** Cervical cancer is one of the leading causes of morbidity and mortality among women especially those living with HIV worldwide. This is attributed to low coverage of vaccination against Human papillomavirus, inappropriate management of women who screen positive, lack of resources or lack of financial commitment and low sensitization among women

**Objective:** Our goal was to determine the prevalence and factors associated with cervical intraepithelial lesions among HIV positive women at Rushere Community Hospital, Kiruhura District.

**Methods:** A cross-sectional study was conducted among 115 participants aged 21-65 years living with HIV. Pap smears from eligible participants were collected after written informed consent. Pap smears were fixed immediately after collection and taken to Uganda Cancer Institute (UCI) for staining and examination. We used a validated questionnaire (PI and supervisors) to collect demographic data as well as other data on factors. Data was analysed using Stata version 17 and results were presented in form of frequency, tables and percentages. Logistic regression was used to determine the factors associated with cervical intraepithelial lesions. A p value of <0.05 was considered statistically significant.

**Results:** The median age of the participants was 36 (IQR 22-43) years and majority of the participants were in between 25-34 years. More than one third of the participants, 47/115 (40.87%), had cervical intraepithelial lesions, where; low grade squamous intraepithelial lesions (LSIL) were the most prevalent (18.26%, 21/115), followed by high grade squamous intraepithelial lesions (HSIL) 8.7% (10/115) and atypical squamous cells can't exclude high grade lesions, ASC-H (1.74%, 2/115). A young age at first pregnancy (adjusted OR 1.26, P value 0.023) and Haemoglobin levels (adjusted OR 0.83, P value 0.037) were significantly associated with cervical intraepithelial lesions.

**Conclusion:** The prevalence of cervical intraepithelial lesions among HIV positive patients is high with Low Grade Squamous intraepithelial Lesions (LSIL) being the most prevalent. Women who had their first pregnancy at an early age and those with low haemoglobin levels are more likely to have cervical intraepithelial lesions. More studies are recommended to further explore biochemical processes behind haemoglobin concentration and cervical lesions.

**What this study adds:** This research provides additional information on high prevalence of cervical intraepithelial lesions in HIV positive women and informs resource allocation and informed planning. It also established factors associated with cervical intraepithelial lesions that will help sensitize local population about the common preventive measures against contraction of cervical cancer among HIV infected women.

**Key words:** Atypical Squamous cells of Undetermined Significance, Low Grade Squamous intraepithelial Lesions, Atypical Squamous cells can't exclude High grade lesions, High Grade Squamous intraepithelial Lesions, Haemoglobin