Prevalence of Anal Dysplasia in HIV-Infected Women From Johannesburg, South Africa
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Background: Cervical cancer caused by oncogenic Human Papillomavirus (HPV) infection is a common cause of morbidity and mortality in HIV-infected women in Sub-Saharan Africa. HPV infection also causes anal cancer, but the incidence of anal cancer in this population is unclear. In Sub-Saharan Africa, there are no known data available on the prevalence of anal HPV infection or dysplasia in HIV-infected individuals. These are the first epidemiological data on the prevalence of anal HPV infection and dysplasia in HIV-infected women from South Africa.

Methodology: Prospective cohort study of HIV-infected women age 25-65. Participants were recruited from an HIV clinic in Johannesburg, South Africa. Anal swabs were taken for conventional glass-slide cytology and oncogenic HPV testing (Digene HC2). All women with abnormal anal cytology and 20% of women with normal cytology were seen for high resolution anoscopy (HRA) with biopsy of visible lesions. Biopsies were taken at the 6 and 12 positions on anus for women without visible lesions. Women had cervical cytology and HPV specimens obtained. We summarized the baseline characteristics of this cohort using descriptive statistics. Quality assurance of HRA was done through digital pictures and discussion with a specialist.

Results: A total of 88 women have been enrolled. The anal cytology results were normal in 9/88 (10%); 61/88 (69%) had low grade squamous intraepithelial lesions (SIL), and 16/88 (20%) had high grade SIL. 84% of women had an abnormal cervical cytology defined as low grade lesions and above. Anal biopsies results are available for 48 women: 23 (48%) had negative histology, 9 (19%) had atypia, 11 (23%) had low-grade lesions anal intraepithelial neoplasia (AIN) and 5 (10%) had High Grade AIN. 45% of women had high risk HPV detected on anal swabs, and 36% had high risk HPV on cervical swabs. Anal high risk HPV was found in 34% of women with LSIL on anal cytology and 75% of women with HSIL anal cytology.

Conclusions: We have found significant burden of anal HPV infection and abnormal anal cytology. High grade (SIL) on anal cytology was found in 20% of our women which is 2-4X higher than reports from cohorts of men who have sex with men. The observed prevalence of high grade AIN was lower given the cytology reports, and correlation may improve with more provider experience. Further studies should evaluate with rate of anal cancer in HIV-infected women in sub-Saharan Africa. HPV vaccination programs and anal cancer screening should be considered.