

P184 VAGINAL MICROBIOTA ASSOCIATED WITH ONCOGENIC HPV IN A COHORT OF HPV-VACCINATED WOMEN LIVING WITH HIV

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Background The role of the cervico-vaginal microbiome in the incidence and persistence of HPV infection is not well understood, particularly in the context of HIV infection. It is critical to understand this relationship in women living with HIV (WLWH) due to much higher rates of HPV-related disease in this population.

Methods WLWH were offered three doses of qHPV vaccine in a multi-centre study. Visits were at months -3, 0, 2, 6, 12, 18, 24, and annually thereafter. Participants provided health data, HPV DNA samples, and cervico-vaginal swabs for microbiota sequencing (cpn60 amplicon). Persistent HPV was defined as the same HPV type in samples detected at ≥ 2 consecutive visits.

Results 283 cervico-vaginal microbiota samples from 186 women were sequenced (1–3 samples/woman). Samples were taken between 3–8 years post-vaccination. Participants were predominantly Black (39.2%) and Caucasian (37.1%). At baseline, the median age was 38 years (range: 13–66, IQR: 32–45), median CD4 count was 490 cells/mm³ (IQR: 370–680), and 67.4% had an HIV viral load <50 copies/mL. At the time of microbiota swab collection, median CD4 count was 619 (IQR: 409–794). Samples taken at the time of incident HPV detection (n=44) displayed significantly higher relative abundance of *Gardnerella vaginalis* A than samples without incident HPV. Samples from women with persistent oncogenic HPV infection (n=41) had greater relative abundances of *Porphyromonas uenonis* and *Prevotella timonensis* than samples without persistent HPV.

Conclusion This data supports previous reports of an association between *Gardnerella vaginalis* subtype A and HPV incidence. *Porphyromonas uenonis* and *Prevotella timonensis* should be further explored as potential co-factors in HPV persistence.

Disclosure No significant relationships.

P186 NEISSERIA GONORRHOEAE INFECTIONS AMONG PEOPLE LIVING WITH HIV ON ART AT STI CLINIC IN KUMASI, GHANA

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Background HIV infection is a risk factor for the acquisition and transmission of other sexually transmission infections

(STIs). Antiretroviral therapy (ART) suppresses viral load and generally improves the lives of people living with HIV (PLHIV) including resumption of sexual activities. This may lead to an increase in STI rates. We determined the prevalence of *Neisseria gonorrhoeae* among PLHIV who have been on ART

Methods This cross sectional study conducted among PLHIV between June and August 2018 employed a sensitive multiplex real time Polymerase chain reaction (PCR) assay that simultaneously detects the seven most common bacterial pathogens responsible for STI's. PLHIV attending a specialist STI clinic at Suntreso Government Hospital in Kumasi, Ghana who had been on antiretroviral therapy (ART) for more than 5 years were eligible for enrolment into the study. Informed consent was obtained prior to enrolment. Data was analysed using SPSS version 16.

Results There were 400 PLHIV enrolled into the study consisting of 224 (56.0%) males and 176 (44.0%) females. Majority 324 (81.1%) of the participants were asymptomatic. Overall, 245 (61.3%) of enrolled patients were positive for at least one of the seven pathogens tested. *Neisseria gonorrhoeae* was the most common pathogen 44 (10.1%) detected followed by *Mycoplasma genitalium* (26; 6.4%) and *Chlamydia trachomatis* (5; 1.3%). Only 3.9% of the participants with gonorrhoeae had symptoms.

Conclusion *Neisseria gonorrhoeae* remains an important causative pathogen for STI in persons living with HIV. There is the likelihood of most of these infections going undetected since most of them did not have symptoms. Improved diagnostic methods like PCR are needed to identify and treat such STIs effectively when PLHIV who are on ART.

Disclosure No significant relationships.

P187 ANAL CANCER AND PRECURSOR LESIONS IN HIV-INFECTED PERSONS: A CLINICAL COHORT STUDY

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Background Infection with high-risk human papillomavirus increases the risk of developing anal cancer (AC). AC is rare in general populations (incidence rate: 1.8 cases per 100,000 each year). However, recent studies have seen an increased number of AC among people living with HIV-1 infection (PLWH). We aimed to investigate AC regarding its incidence rate and sociodemographic characteristics in a HIV clinical cohort in the southeastern United States.

Methods Electronic health records between 2006 and early 2018 from an academic HIV Clinic at the University of Alabama at Birmingham were reviewed retrospectively. The HIV clinic treats more than 30% of total PLWH in Alabama. Patients with at least two clinical visits and aged 18 and above at HIV diagnoses were included. Age at AC diagnosis, self-reported race and sexual orientation were tested in univariate analyses. All significant variables were fitted in a multivariable logistic model adjusting for nadir CD4 counts and highest viral load (VL) prior to AC diagnoses or last clinical visits for non-AC subjects.