2267. The Effect of Opportunistic Infection (OI) Prophylaxis on the Gastrointestinal Microbiome (GIM) and Immune Reconstitution (IR) in Veterans With HIV and AIDS
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Session: 242. HIV: Opportunistic Infections and other Infectious Complications Saturday, October 6, 2018: 12:30 PM

Background. Despite antiretroviral therapy (ART), some patients do not achieve IR. Moreover, GI bacterial translocation may lead to a decrease in CD4 counts with an increase in IL-6 in blood. However, the effect of OI prophylaxis on the GIM, bacterial translocation and IR has not been studied in HIV+ veterans. Here we studied the gut microbiome and bacterial translocation in VA patients with (i) stable HIV on ART (controls), (ii) newly diagnosed HIV starting on ART (new dx and OI prophylaxis), and (iii) resuming ART (resumers).

Methods. Blood and stool specimens from 16 controls, 4 new dx and 3 resumers were obtained at 3 visits, as well as clinical and virological data. PCR electrospary ionization mass spectrometry (ESI-MS) was performed on blood samples to detect bacteria, yeast, and fungi. 16S and 18S rRNA genes (deep sequencing bacterial 16S rRNA) were done on stool.

Results. There was no relation between CD4 count, log CFU TMP-SMX-resistant Gram-negative bacteria (GNB) or total anaerobes. Except for 2 control patients with a decrease in CD4 count <200, none took TMP-SMX. One of these control patients started TMP-SMX, while the other took atovaquone. Neither had TMP-SMX R GNRs in stool, despite low CD4/TMP-SMX, Major stool phyla in controls were Bacteroidetes (37 ± 19%), Firmicutes (37 ± 14%), Proteobacteria (15 ± 14%); while resumers had 54 ± 14% Bacteroidetes, 33 ± 12% Firmicutes and 7 ± 1% Proteobacteria. Only one new dx individual had CD4 count <200 at dx and took doxycycline initially for hidradenitis suppurativa. Dapsone was initiated due to sulfa allergy. He was also diagnosed with lung cancer, treated with resection/XT and received cetuximab. His VL became undetectable but CD4 >200. He had persistence of TMP-SMX-resistant GNRs despite

dapsone and a shift in his GIM was observed over the first 6 months of care, i.e., Bacteroidetes decreased from 61.5% to 29.5% and Firmicutes increased from 30.6% to 53.3%

Conclusion. OI prophylaxis does not affect the GIM of stable HIV VA patients on ART. TMP-SMX-resistant GNRs in stool are unrelated to TMP-SMX exposure or CD4 count. Other antibiotics such as doxycycline can alter GI microbiota and may affect immune reconstitution.

Disclosures. All authors: No reported disclosures.

2269. HIV-Positive Individuals Who Report Being in Care Are Less Likely to Be Co-Infected With an STI; an Analysis of “Network Testing,” A Service Program Offering HIV and STI Testing Services to Individuals at Risk for HIV
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Background. The prevalence of STIs among people living with HIV (PLWH) has implications for HIV treatment as prevention and community efforts to stop the spread of HIV. We explored the factors associated with HIV/STI co-infection in HIV-positive individuals.

Methods. We analyzed data from our “Network Testing” service program, which was designed to expand HIV/STI testing services to high-risk individuals including gay, bisexual, and other men who have sex with men (MSM) in Chicago’s South side, a high HIV prevalent area. This program provides incentivized testing to participants and up to six referred individuals within their social network. The prevalence of selected STIs, including syphilis, gonorrhea, or chlamydia infection, among HIV-positive individuals was evaluated. Bivariate and multivariable logistic regression analyses were used to test sociodemographic, testing history, and risk factors significantly associated with HIV/STI co-infection.

Results. Of the 295 HIV-positive individuals, 110 (37%) tested positive for at least one STI, with 90 (32%) positive for syphilis, 23 (16%) for gonorrhea, and 12 (8%) for chlamydia. The median age was 27 years old and 91% of clients were MSM. In multivariable analyses, individuals who reported being in care less likely to be co-infected (aOR=6.10, 95% CI 1.87–19.90). We found no association with co-infection and other risk factors including multiple partners and condomless sex.

Conclusions. The high STI prevalence among HIV-positive individuals suggests:
• a continued need for regular STI testing and treatment among PLWH to reduce the likelihood of HIV transmission to others; and 2) the receipt of HIV care serves as an important opportunity to provide comprehensive services including STI testing/ treatment.

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