2267. The Effect of Opportunistic Infection (OI) Prophylaxis on the Gastrointestinal Microbiome (GIN) and Immune Reconstitution (IR) in Veterans With HIV and AIDS

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Session: 242. HIV: Opportunistic Infections and other Infectious Complications
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Background. HIV patients face higher rates of morbidity compared with the general population, largely due to the earlier development of age related diseases (cardiovascular disease, kidney disease, and chronic immune related and inflammation are the main contributors to this process, it’s relation to lung injury in HIV remains unknown. Despite restoration of systemic immune function following Antiretroviral Therapy, the risk for lower respiratory tract infection remains elevated in the HIV population. The objective of the study was to assess the relationship between pulmonary inflammation and lung injury.

Methods. A prospective cohort study was performed, participants include hospitals hospitalized in Hospital Universitario San Vicente Foundation and Clinica SOMA, in Colombia. Patients were eligible if they were over the age of 18 and had a documented HIV infection or if they have HIV with newly diagnosed community acquired pneumonia (CAP). The main exclusion criteria were chronic lung disease and immunosuppression that is not due to HIV. Patients belonged to two groups: HIV and HIV + CAP. A total of 84 patients were followed for the majority of the variation between the two groups. Furthermore, Kruskal–Wallis testing demonstrates that B cell and CCL3 are elevated in the HIV + CAP group compared with the HIV group (P < 0.005). Other markers of bacterial translocation and monocyte activation did not differ between these groups. FVC and FEV1 measurements are lower in the HIV + CAP group compared with the HIV group, while FEV1/FVC remain constant.

Conclusion. The results of this study identify a unique constellation of biomarkers in HIV patients with CAP, this constellation of biomarkers consists of pro-inflammatory cytokines and markers of extracellular matrix remodeling, hinting at the occurrence of an inflammatory and tissue injury process in the lungs. This is supported by the restrictive ventilation pattern seen in this group of patients.

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2268. Clinical Difference of Mycobacterium haemophilum Infections Between HIV and Non-HIV-Infected Patients

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Session: 242. HIV: Opportunistic Infections and other Infectious Complications
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Background. Mycobacterium haemophilum has emerged as one of non tuberculous mycobacteria which caused and localized disseminated infections in immunocompromised patients. Infections caused by this pathogen were rarely diagnosed and reported because it can grow only in heme supplemented culture media.

Methods. We performed a case–control study at Siriraj hospital, the biggest tertiary care hospital in Thailand, to determine the clinical difference and an treatment outcome of this infection between HIV-infected and non-HIV-infected individuals.

Results. From January 2012 to December 2017, there were 21 patients diagnosed with Mycobacterium haemophilum infections. Eight of them were HIV infected. Rest of the patients were non-HIV immunocompromised which SLE was the most common comorbidities (autoimmune diseases 6 patients, anti-IFN gamma auto Ab 2 patients, kidney transplant recipients 2 patients, diabetes mellitus 2 patients and nephrotic syndrome 1 patient). The most common clinical manifestation was cutaneous involvement (13 patients, 61.9%). The result revealed that HIV-infected patients were much younger in comparison with non HIV-infected patients (mean age 39 ± 10 VS. 52 ± 14 years; P = 0.025). Disseminated infection was more common in HIV-infected patients (37.5% vs. 15.4%; P = 0.325) and three of eight HIV-infected patients (37.5%) had gastrointestinal system involvement whereas none of non-HIV infected patients had it (P = 0.042). The prognosis was slightly worse in HIV-infected individuals (Unfavorable prognosis 27.5% in HIV-infected VS. 15.4% in non-HIV-infected patients; P = 0.325).

Conclusion. HIV infection is the most common immunocompromised condition related with Mycobacterium haemophilum infection. Central nervous system involvement is more common in HIV infected patients.

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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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2271. Adherence to Pre-Exposure Prophylaxis Is Associated With Sexually Transmitted Infections Among Men Who Have Sex With Men in the Deep South
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Session: 243. HIV: Sexually Transmitted Infections
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Background. Pre-exposure prophylaxis (PrEP) reduces HIV acquisition, but there are reports of high sexually transmitted infection (STI) rates among PrEP clients, possibly related to high-risk sexual behaviors (risk compensation). The study objective was to identify the prevalence and facilitators of STIs among men who have sex with men (MSM) at a Deep South PrEP clinic.

Methods. This was a retrospective analysis of MSM aged ≥18 years receiving STI testing at a university-affiliated PrEP clinic in Birmingham, AL from 2014 to 2018. Clients were screened for gonorrhea and chlamydia in the oropharynx, urine, and rectum by nucleic acid amplification test and syphilis by serological testing at least every 6 months. Results of STI testing and biannual patient-reported outcomes (PROs) for condomless anal sex, numbers of sexual partners within the last 3 months, and PrEP adherence were analyzed. The outcome of interest was any positive STI. We evaluated the association of STIs with these PROs using logistic regression.

Results. 141 MSM met study criteria: 29 (21%) were age 18–24, 39 (28%) identified as black, 25 (18%) reported consistent condom use, 22 (17%) reported >7 sexual partners in the past 3 months, 97 (69%) were prescribed PrEP, and 41 (29%) had at least one positive STI test. By univariate analysis, sexual partner number >7 and PrEP adherence were significantly associated with STIs; age and race were not. In multivariable analysis (Table 1), >7 sexual partners and PrEP adherence were independently associated with STI infection.

Conclusion. In a university-based PrEP Clinic in the Deep South, STIs were common in MSM. Our findings suggest that risky sexual behaviors among PrEP clients contribute to STIs, especially for those reporting PrEP adherence and high number of sexual partners, and highlight STI prevention opportunities.

Table 1: Multivariable Analysis of STIs Among PrEP Clients at a University-affiliated PrEP Clinic

|                  | With STI N (%) | Odds Ratio (95% CI) |
|------------------|----------------|---------------------|
| Consistent Condom use |                |                     |
| Yes*             | 5 (14)         | 1.6 (0.5–5.2)       |
| No               | 28 (76)        |                     |
| Number partners/3 months |        |                     |
| 0                | 2 (5)          | 3.5 (0.3–38.3)      |
| 1*               | 5 (13)         | 1.7 (0.5–5.6)       |
| >7               | 14 (36)        | 9.7 (2.4–40.2)      |
| Adherence        |                |                     |
| Not on PrEP*     | 7 (17)         |                     |
| Missed dose 0–2 weeks ago | 5 (12) | 1.2 (0.3–5.1)       |
| Missed Dose >2 weeks ago | 29 (71) | 4.7 (1.4–15.4)      |

*Denotes referent