AIDS-defining cutaneous pathologies

| No. of new cases | No. of remote cases |
|------------------|---------------------|
| Coccioidiomycosis | 1                   |
| Cryptococcosis    | 0                   |
| Chronic herpes complex | 3     |
| Histoplasmosis    | 0                   |
| Kaposis Sarcoma   | 0                   |

Conclusion. Dermatologic manifestations continue to be common in our aging HIV seropositive population. The most common diagnosis was syphilis, reflecting an ongoing epidemic of this disease in this population, followed by more common diagnoses with chronic keratitis, seborrheic dermatitis and onychomycosis. Comparison within the population of more current dermatologic diagnoses with more remote diagnoses shows fewer dermatologic manifestations of cryptococcosis, chronic herpes simplex, histoplasmosis and Kaposis Sarcoma.

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566. When Viral Suppression Is Not Enough: Clinical Characteristics of HIV Infected Patients with Poor Immune Recovery

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Session: 63. HIV Clinical Care and Outcomes Thursday, October 5, 2017: 12:30 PM

Background. The use of combination antiretroviral therapy (ARTV) has made it possible to halt HIV replication, achieve CD4+ recovery and immune reconstitution. Some patients with long-term viral suppression never adequately recover their CD4+ count and manifest increased mortality. Age, CD4+ nadir, Hepatitis C infection have been associated with incomplete immune recovery. By matching for age, gender, and CD4 nadir, we aim to elucidate the role of clinical factors in virally suppressed patients with suboptimal CD4 recovery.

Methods. Retrospective record review of patients with CD4 <200 (Cases) and CD4 >500 (Controls) with over 2 years of viral suppression (viral load <200) on ARTV for the same duration, was conducted. One case was matched to 2 controls by age, gender and CD4 nadir. Associations between variables were assessed using univariable exact conditional logistic regressions.

Results. Of the 1265 charts reviewed, 13 cases were identified. A unit higher BMI was significantly associated with a 13% lower odds of having low CD4 (P = 0.04). Higher hemoglobin A1c (A1c) was associated with 82% lower odds of having low CD4 (P = 0.02). Other non-significant comparisons include ethnicity; 33% cases were Hispanic vs. 16% in controls. Gastrointestinal (GI) symptoms were more common in the cases (83% vs. 50%), as was lymphadenopathy (LAD) (36.4% vs. 25%). Mean years since diagnosis was longer in cases (19.2 vs. 16.7) despite the duration of ARTV being longer in controls. Mean number of comorbidities was higher in cases (3.17 vs. 2.75). Controls had more statin use (45.8% vs. 25%).

Conclusion. Incomplete CD4 recovery was significantly associated with lower BMI, suggesting that despite viral suppression, these patients are vulnerable to metabolic issues that affect uncontrolled HIV patients. We hypothesize that rapid control of HIV in this suburban population was associated with weight gain and noted that the BMI in controls was in the obesity range. Statin use may play a protective role in the controls, perhaps due to its anti-inflammatory properties. Trends in GI symptoms, LAD, number of comorbidities, albeit not statistically significant, seem to be important. Due to small sample size, this study was underpowered to fully assess the effect of these factors. Thus this study should be considered exploratory.

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567. Assessing Residents’ Perception of Their Ability to Manage Chronic Musculoskeletal Pain in HIV-Infected Patients

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Background. Chronic pain in HIV infected patients is common in the ambulatory setting, the majority of which is musculoskeletal (MSK). Addressing patient’s pain is essential but physicians often fail to adequately manage MSK pain. Additionally, HIV patients with chronic non-cancer pain (CNP) have a 2-fold increase in the risk of opioid misuse compared with the general population. We sought to determine the extent of pain complaints and opioid prescriptions in our HIV clinic as well as assess the comfort and ability of our residents to develop a comprehensive pain management plan.

Methods. We created a chart review of all patients seen by our Internal Medicine (IM) residents in the HIV primary care in Detroit, MI from 01/2017-05/2017 and collected demographic and pain-related data. We also surveyed IM residents assigned to HIV primary care clinic on their knowledge and comfort developing management plans for CNCP. IRB waiver was obtained.

Results. A total of 249 HIV infected patients were seen from January 2017 to May 2017. Forty-one of 249 (16%) of patients were identified as having CNCP and of these patients, 40 (16%) were treated with opioids. MSK symptoms were present in 33/40 (82%) of the total complaints. This included back pain (n = 20), lower extremity pain (n = 10), and upper extremity pain (n = 2). Only 5/41 (12%) patients were prescribed physical therapy for their pain complaints. Fifteen of 20 (75%) of IM residents responded to a survey on their comfort and knowledge in treating CNCP. None of the 15 (0%) felt completely comfortable developing a plan for CNCP. A PT (13%) felt their examination skills were adequate in assessing MSK symptoms in patients with CNCP. 12/15 (80%) felt working in collaboration with a physical therapist (PT) would be beneficial in developing effective treatment plans and 10/15 (67%) thought working in collaboration with a PT would help further develop their examination skills.

Conclusion. A survey of our IM residents has found gaps in both knowledge and comfort in CNCP pain management and high levels of opioid prescriptions in our HIV primary care clinic. Here we provide evidence that IM residents require additional training in treating CNCP in HIV patients and are interested in multidisciplinary approaches to development of non-pharmacologic treatment plans for HIV infected patients with CNCP.

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569. Immune Microenvironments of Anal Cancer Precursors Differ by HIV- Serostatus and are Associated with Ablation Outcomes

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**Session:** 64. HIV: Cancer and Dysplasia

**Thursday, October 5, 2017:** 12:30 PM

**Background.** HPV-associated anal cancer precursors (high-grade squamous intraepithelial lesions, HSIL) follow a more virulent course in HIV+ patients than in their HIV− counterparts. This study aims to characterize the subpopulations of mucosa-infiltrating T lymphocytes in HSIL microenvironmments, correlating them with HIV−serostatus and electroacutery ablation (EBA) outcomes.

**Methods.** Using immunohistochemistry, we quantified mucosa-infiltrating CD4+ and CD8+ T lymphocytes in 115 HSIL (from 70 HIV+ and 45 HIV− patients) and 20 benign anal mucosa samples (from 10 HIV+ and 10 HIV− patients). Clinico pathological parameters were collected and compared by HIV status.

**Results.** Patients’ age, cytology diagnoses, and HPV types were comparable between HIV+ and HIV− groups. In benign controls, T lymphocytes were sparse in both HIV+ and HIV− anal mucosa. The number of total mucosa-infiltrating T lymphocytes and the CD8+ subset were significantly higher in anal HSIL from HIV+ subjects than in those from HIV− subjects (mean 71 vs. 47; 46.5 vs. 22/HPP, P < 0.001) whereas the CD4+ subset was similar between groups (24.5 vs. 25/HPP, P = 0.4). Among patients who underwent EA, subsequent anococcygeal biopsy detected persistent anal HSIL in 21/51 (41%) HIV+ and 5/27 (19%) HIV− patients (P = 0.04, mean 12-month follow-up, range 3-36). Unadjusted analysis showed a trend towards EA failures associated with HIV seropositivity (OR 2.0; 95% CI 0.80–4.9) and increased number of mucosa-infiltrating CD8+ T cells (OR 2.3; 95% CI 0.9-5.3).

**Conclusion.** Anal HSIL immune microenvironments differ significantly by HIV serostatus. HSIL in HIV+ subjects with increased mucosa-infiltrating CD8+ T cells tended to persist after EA. Therapies that target mucosal immunity may improve treatment outcomes of those lesions.

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570. Alarming High Rate of Prostate Cancer Detected by Routine Prostate-Specific Antigen Screening in a County HIV Clinic

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**Session:** 64. HIV: Cancer and Dysplasia

**Thursday, October 5, 2017:** 12:30 PM

**Background.** Routine prostate-specific antigen (PSA) screening in the general population and in HIV-infected men is controversial. The aim of this study is to determine the prevalence of prostate cancer (PC) among patients living with HIV (PLWH).

**Methods.** After an index case of PC was detected by sporadic PSA screening, we performed a prospective (2/2010–10/2016) cohort study following PSA levels and biopsies of African-American (AA) men ≥45 years and non-AA men ≥50 years. Screening was done at the discretion of the provider.

**Results.** Of the 124 men (82 AA, 17 Hispanic, 16 Caucasian, 7 Asian, 2 other) who received PSA screening, 7 (5.6%) had a PSA > 5 and underwent prostatic biopsy. Five patients (4%) were found to have PC, all of whom had a history of good long-term HIV virologic control. Mean age of PC patients was 60 years vs. non-PC patients (55 years) (P = 0.031). Mean years of HIV in PC patients was 18 years vs. non-PC patients (14 years) (P = 0.068).

**Conclusion.** PSA screening is controversial and not universally recommended. Other retrospective studies of PLWH have shown equally high rates of PC. Compared with the general population (1/1,000 non-AA and 1.7/1,000 AA), men in our cohort had a 25 times higher rate (4%) of PC. All patients had aggressive tumors and required surgery, including one patient with metastasis to regional nodes. As expected, age was a significant risk factor for PC. We recommend implementing routine cohort PSA screening in PLWH.

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571. Clinical Characteristics and Outcomes of HIV-Infected Patients with Non- AIDS Defining Cancers (NADCs) in a National Institute Cancer in Mexico

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**Session:** 64. HIV: Cancer and Dysplasia

**Thursday, October 5, 2017:** 12:30 PM

**Background.** Non-AIDS Defining Cancers (NADCs) have been recognized as an increasing cause of morbidity and mortality in HIV patients, related mainly to co-infections and/or lifestyle risks. There is no data of NADCs prevalence in Mexico. We describe type of NADCs, clinical characteristics and outcomes of HIV-infected individuals with NADCs.

**Methods.** We conducted a retrospective study of 1126 patients attending the HIV/AIDS Clinic at Instituto Nacional de Cancerología in Mexico city (a tertiary care center for adult patients with cancer), since 1996 to December 2016, who had confirmed NADCs after HIV diagnosis. Demographic and clinical data were collected for all HIV patients with NADCs.

**Results.** Over 1126 HIV-positive individuals seen at the INCAN, 139 (12.3%) patients developed a NADC, five patients developed two NADCs during their follow-up, 114 (82%) were male. The median age at diagnosis of NADCs was 42.4 ± 10.9 years, the median of CD4 was 354.4 cell/mm at that time of NADCs, 81 of them (56.3%) had a CD4 count >200 cell/mm3, 81 (56.3%) had undetectable HIV viral load. In males the distribution of NADCs was 36 (25%) Hodgkin's lymphoma (HL), 16 (11.1%) anal cancer, 13 (9.9%) germinal tumors males, and two lung cancers, and in females: 11 (7.7%) vulvo-vaginal, seven (4.9%) breast cancer, four (2.8%) thyroid cancer and one case of Hodgkin's lymphoma. The median of follow-up of NADCs was 2.5 (IQR 0.4-3.6) years. Nine patients died attributable to NADCs and 51 patients lost of follow-up.

**Conclusion.** HL was the most frequent NADC on men as it has been described in other reports, followed by anal cancer. In women vulvo-vaginal cancers were the most frequent. These three malignancies are related with viral etiology. Lung cancer was uncommon, different from that described in the US population, smoking is less frequent in the HIV Mexican population. NADCs can occur at any stage of HIV infection, regardless of immune status.

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572. Missed Opportunities for Primary Prevention of Cardiovascular Disease in an HIV Clinic

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**Session:** 65. HIV: Cardiovascular Disease, Lipids, Diabetes

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**Background.** Atherosclerotic cardiovascular disease (ASCVD) is a leading cause of death among people living with HIV (PLWH). PLWH have a high prevalence of ASCVD risk factors, including hypertension (HTN), dyslipidemia, diabetes mellitus (DM), elevated BMI, smoking, physical inactivity, and poor diet.