

September 1, 2015 and September 30, 2016. TTE studies were analyzed by a board certified Cardiologist and subgroup analyses were conducted by chi-square tests.

Results. Patients ($n = 50$) were predominantly male (96%), most commonly black race (60%), with a mean age of 28 years. Ten (20%) patients were active smokers and 2 (4%) had hypertension. The mean time from estimated date of HIV seroconversion to initial cardiac evaluation was 304 days. The mean CD4 count was 551 cells/uL and 2 (4%) patients were diagnosed with AIDS by CD4 criteria. The mean VL was 112,585 copies/mL and 15 (30%) had a VL >100,000 copies/mL. All patients had normal cardiovascular function as determined by ejection fraction (EF) and global longitudinal strain (GLS). Evidence of right ventricular dilation and cardiac remodeling was observed in 7 (14%) and 13 (26%) patients, respectively. Grade 2 diastolic dysfunction was observed in a single patient who had a VL >10 million copies/mL and CVD risk factors including age >50 years and active smoking. Subgroup analyses showed no significant differences in TTE results by CD4 cell count, VL, duration of HIV infection or traditional CVD risk factors ($p > 0.05$ for all).

Conclusion. Although no cases of GLS or reduced EF were observed, a small proportion exhibited other TTE abnormalities during early HIV infection. These data suggest that untreated viral replication may have a low impact on CVD development early in the course of HIV infection. Longitudinal studies are warranted to determine the optimal timing of cardiac assessments to proactively identify CVD in HIV-infected persons.

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579. Associations Between Apolipoprotein-A5 Genotype, High-Fat Diet and Plasma Lipid Levels among HIV-infected Children Initiating Antiretroviral Therapy in India

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Background. Both antiretroviral therapy (ART) and polymorphism in genes involved in lipoprotein metabolism contribute to the development of ART-induced dyslipidemia. Apolipoprotein A5 (APOA5) gene variant, which vary by race/ethnicity, influence plasma lipid concentrations. We explored the association of candidate gene effect on plasma lipid levels with food in HIV-infected children initiating ART in south India.

Methods. HIV-infected children, between 2 and 12 years of age initiating non-nucleoside reverse transcriptase inhibitor (NNRTI)-based ART during 2010–2014 were included. They were assessed for their dietary intake by 24-hour dietary recall. Fasting blood was drawn for serum triglycerides (TGL), total cholesterol and high-density cholesterol along with CD4 cell count, and HIV-1 viral load. APOA5 gene polymorphisms rs662799, rs3135506 were determined by Taqman single-nucleotide polymorphism (SNP) genotyping assays. The General Linear Model (GLM) was applied to explore the risk of hypertriglyceridemia for SNP's rs662799 and rs3135506 with food interaction in children.

Results. Three hundred and ninety HIV-infected children [median age (IQR): 9 (5–11) years; and median viral load: 141,000 (25,876–436,000) copies/mL] were started on NNRTI-based ART. The frequency of c allele was 20% and 3.0% in rs662799, rs3135506, respectively. The GLM model suggested that the SNP rs662799 has significant association with TGL ($P < 0.01$); there was, however no interaction between gene polymorphisms and food. Also, the prediction model revealed that those who had a carrier allele (C) had higher TGL level as compared with those with wild type (165 vs. 138 mg/dL) and girls had higher TGL levels compared with boys.

Conclusion. Children with carrier allele of APOA5 are prone to hypertriglyceridemia, irrespective of diet or drugs. These children require periodic monitoring of lipid parameters and effective interventions to prevent the development of atherogenic or metabolic complications.

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580. The Prevalence and Outcome of pre-DM/DM in an Urban HIV Primary Care Clinic

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Background. Diabetes mellitus (DM) is an important cause of mortality and morbidity in the US. There are limited data on DM prevalence among HIV infected patients (HIV+ patients). A recent study found that DM prevalence was higher among HIV+ patients (10.3%) vs. the general US population (8.3%), and was higher regardless of age, sex, and obesity status. We report on the prevalence of pre-DM/DM in our HIV clinic and outcomes.

Methods. Cross-sectional study by retrospective medical record review of patients ≥ 18 years who received HIV primary care at the Peter Krueger Clinic (PKC) at Mount Sinai Beth Israel, NY during October 2015–September 2016. The endocrine clinic is located outside PKC. Data collected include prevalence of pre-DM (Hgb A1C 5.7–6.4) and DM, demographics and HIV disease characteristics. Inadequate glycemic control was defined as Hgb A1C ≥ 7.0 in $\geq 50\%$ of measures during study.

Results. There were 1137 HIV+ patients during the study period. The population was mostly Black or Hispanic; mean age was 52.6 ± 11.2 years; 70% were male. Pre-DM prevalence was 301/1137 (26.5%) and DM prevalence was 176/1137 (15.5%). In univariate analysis, patients with DM were more likely to be older, female, Hispanic, HCV co-infected, had higher BMI, longer duration of HIV infection, and family history of DM (all p values < 0.05). Almost 40% of those with DM were also HCV co-infected. Of the 176 with DM, 91 (52%) had inadequate glycemic control. Only insulin use and referral to endocrinology were associated with poor control ($P < 0.05$).

Conclusion. Rates of DM in our HIV clinic were almost twice the rate reported in the adult US population (8.3%) and 25% had pre DM. Traditional risk factors such as older age, family history, and higher BMI were more frequent in our population. The poorer outcomes in those referred to endocrine probably reflect difficult to manage advanced DM that prompted endocrine referral. The high rates of DM and pre DM supports the DHHS recommendation for screening and consideration of co-location of endocrine services to promote appropriate glycemic control

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581. Venous Thromboembolism in Patients Infected with Human Immunodeficiency Virus

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Background. During the current anti-retroviral era, the morbidity and mortality related to Human Immunodeficiency Virus (HIV) infection has shifted away from Acquired Immunodeficiency Syndrome (AIDS)-defining conditions and towards other clinical events. HIV-infected patients are at greater risk of developing venous thromboembolism (VTE) than the general population, with reports of up to a tenfold increased risk. Our clinical observations support these findings and suggest that degree of immunodeficiency and viral replication are predictive factors. Our aim is to identify characteristics common to HIV-positive patients who develop VTE.

Methods. All patients with HIV in the VA Loma Linda Healthcare System's Clinical Case Registry (CCR) from 2000 to 2015 were screened to identify those with a history of deep venous thrombosis (DVT) or pulmonary embolism (PE); these patients were included in a retrospective case series. Each patient's chart was reviewed to record epidemiological and clinical characteristics, which were described using frequencies for categorical variables, and mean and standard deviation (SD) for quantitative variables.

Results. 35 patients with HIV and history of DVT or PE were included in the retrospective case series. The incidence of VTE in this patient population is 3.5% from 2000 to 2015. All 35 patients were male (21 Caucasian, 10 African-American, and 4 Latin-American). Mean (SD) age at time of diagnosis of VTE was 58 (12), and mean (SD) BMI was 25.65 (4.51). 2.9% of patients ($n = 1$) had used injection drugs. 85.7% ($n = 30$) were on anti-retroviral therapy (ART) at the time of diagnosis. 48.6% ($n = 17$) had a history of opportunistic infection or malignancy, and 57.1% ($n = 20$) had a history of recent hospitalization or surgery. Mean (SD) CD4 count at the time of diagnosis of VTE was 377 (244), while 34.3% ($n = 12$) had detectable viral load and mean (SD) viral load was 16,697 (44,937).

Conclusion. Patients with HIV and who developed VTE often had relatively low CD4 counts and relatively high viral loads. This suggests a potential association of VTE with degree of immunodeficiency and viral replication, as seen in previous studies. Further investigation is necessary to determine correlation and/or causation.

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582. Opportunistic Infections in Patients with HIV/AIDS at the Hospital Universitario de Santander: An Anatomopathological Study in the Period 2004–2016

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Background. HIV/AIDS-related infections are commonly presented in a disseminated form, compromising a high variety of organs and systems, mainly the Respiratory and Central Nervous System (CNS). In developing countries, the opportunistic agent