Conclusion. Hypertension, congestive heart failure, stroke, and chronic kidney disease were associated with high RDW. Our study suggests that high RDW may be a marker of cardiovascular and renal dysfunction in well-controlled HIV-infected patients.

Disclosures. All authors: No reported disclosures.

2258. Clinical Predictors of Acute Kidney Injury in HIV Infected Patients Treated With Tenofovir Disoproxil Fumarate (TDF)
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Session: 241. HIV: Metabolic, Cardiovascular, and Renal Complications
Saturday, October 6, 2018: 12:30 PM

Background. TDF is a nucleotide reverse transcriptase inhibitor used in the management of HIV; Hepatitis B, and in pre-exposure prophylaxis. TDF is potentially toxic to renal proximal tubules leading to overt nephrotoxicity in some recipients. Previous studies have identified risk factors for renal dysfunction in male veterans and Asia. It is unclear if these results generalize to female patients and other ethnic groups.

Methods. We conducted a retrospective review of HIV-infected patients treated with TDF in a Ryan White funded clinic at the University of Kentucky which provides HIV care to ~1,600 patients from central and eastern Kentucky. To be included, subjects had to be at least 18 years of age and started a TDF containing regimen between January 1, 2012 and December 31, 2016. Follow-up was through March 2017. We collected demographic and relevant clinical data from the Electronic Medical Record. Acute kidney injury (AKI) was defined as a ≥50% rise in serum creatinine after TDF initiation. Primary outcome was time to AKI using Kaplan–Meier (KM) and Cox proportional hazards analyses.

Results. The 660 subjects meeting inclusion criteria were largely male (79.8%) and ethnically white (69.7%), African-American (22.6%), and Hispanic (6.8%). Average age was 41.2 years (SD 11.9 years). During the study period 88 subjects developed AKI. In KM analyses, risk of AKI was greater for females (P = 0.01), upper tertile of age (>47.5 years, P = 0.004) and among patients with hypertension (P = 0.001), diabetes mellitus (DM) (P = 0.02) having detectable HIV viremia (P = 0.0004) or Hepatitis C viremia (P = 0.00002). In the Cox model, female sex (hazard ratio [HR]=1.68, P = 0.0002) increased risk of AKI. Neither ethnicity nor DM were associated with AKI.

Conclusion. The factors associated with greatest AKI risk during TDF treatment were hepatitis C viremia and HIV viremia. Older age, female sex, and hypertension were significantly associated with increased AKI. We found neither DM nor ethnicity were independently associated with AKI.

Disclosures. All authors: No reported disclosures.

2259. Effect of Discontinuation of Tenofovir Disoproxil Fumarate (TDF) on Renal Function in Elderly Veterans
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Session: 241. HIV: Metabolic, Cardiovascular, and Renal Complications
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Background. A new formulation of tenofovir with alafenamide (TAF) has been introduced that promises to reduce the risk of renal disease. However, the clinical impact of TAF in elderly persons with HIV/AIDS and comorbid renal disease has not been fully investigated. Using patient data from Louis Stokes Cleveland VA Medical Center we study examined the effect of TDF discontinuation on renal function.

Methods. With IRB approval, clinical data from 272 veterans with HIV/AIDS were gathered to estimate glomerular filtration rate (eGFR) using CKD-EPI (CE) and Cockcroft-Gault (CG) formulae.

Results. 122 patients were excluded because they did not meet the criteria for the study or for insufficient data. The remaining 150 patients had a mean age of 57.7 years. 96.7% were male, 51% African American, 50% were smokers, 28% had diabetes and 63% had vascular disease risk factors. Baseline mean sCr value was 1.1 ± 0.3. Mean CD4 was 627 ± 372 on TDF containing regimens (703 ± 344 after switch) and 66% had viral loads <20 cp/mL. Serum creatinine (sCr) values before and after the switch of TDF were collected, and eGFR and rate of change for eGFR and sCr were calculated. In a univariate manner, variables were also examined within 3 tertiles of age of TDF led to improvement in eGFR.

Conclusion. Discontinuation of TDF led to improvements in eGFR.

Disclosures. All authors: No reported disclosures.
TDF exposure in each age group. Within 0–3 days of life, TDF+ had a greater decline in phosphate reabsorption between 4 and 30 days of life in the TDF+ compared with the TDF− group (P = 0.006, Figure 1). Bone markers did not differ by TDF exposure within either age group.

Conclusion. Urinary phosphate loss was increased among HEU neonates of mothers who took TDF in late pregnancy. This suggests proximal tubular dysfunction and may explain, at least in part, the decrease in BMC previously described.

Disclosures. All authors: No reported disclosures.

2261. Phosphaturia in HIV-Exposed Uninfected Neonates Associated With Maternal Use of Tenofovir Disoproxil Fumarate in Late Pregnancy

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Session: 241. HIV: Metabolic, Cardiovascular, and Renal Complications

Background. Our recent study showed significantly lower bone mineral content (BMC) in HIV-exposed uninfected (HEU) neonates born to HIV-infected (HIV+) mothers who took tenofovir disoproxil fumarate (TDF) in late pregnancy compared with no TDF use. In this cohort we sought to understand possible mechanisms for lower BMC by comparing markers of bone metabolism and renal function with TDF exposure in HEU neonates.

Methods. Among a subset of HEU children in the multicenter (United States and Puerto Rico) observational Surveillance Monitoring for ART Toxicities (SMARTT) Cohort study, we enrolled neonates (236 weeks gestational age) of HIV+ mothers who took TDF for 28 weeks in the third trimester (TDF+) or no TDF in pregnancy (TDF−). In addition to BMC measures, we collected a blood and urine sample on each child ≤30 days of birth to measure serum creatinine, phosphate, 25-OH vitamin D, parathyroid hormone and urine creatinine, phosphate and N-terminal telopeptide. Standard equations were used to estimate proximal tubular phosphate reabsorption and glomerular filtration rate (eGFR). Comparisons were made by TDF exposure using Wilcoxon and Fisher’s exact tests. We fit linear models to compare TDF+ and TDF− for each assay by age in days at sample collection (slope), stratified by age group at sample collection time (0–3 days, 4–30 days).

Results. Of 160 HEU neonates (Black 71%, Hispanic 31%), 82 were TDF+ and 78 TDF−. Sociodemographic and anthropometric characteristics did not differ by TDF exposure in each age group. Within 0–3 days of life, TDF+ had a greater decline in serum creatinine (P = 0.04) and a greater increase in eGFR compared with TDF− (P = 0.06), but no difference in slope by TDF exposure within 4–30 days of life, nor in serum phosphate in either age group. Proximal tubular phosphate reabsorption was similar for both groups within the first 3 days of life, with a significantly greater decline in phosphate reabsorption between 4 and 30 days of life in the TDF+ compared with the TDF− group (P = 0.006, Figure 1). Bone markers did not differ by TDF exposure within either age group.

Conclusion. Phosphaturia was increased among HEU neonates of mothers who took TDF in late pregnancy. This suggests proximal tubular dysfunction and may explain, at least in part, the decrease in BMC previously described.

Disclosures. R. Van Dyke, Gilead Sciences: Grant Investigator, Research grant.

2262. Not a Disease of the Past: A Case Series of Progressive Multifocal Leukoencephalopathy in the Established Antiretroviral Era

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Session: 242. HIV: Opportunistic Infections and other Infectious Complications

Background. Progressive multifocal leukoencephalopathy (PML) and PML immune reconstitution inflammatory syndrome (PML-IRIS) can be a devastating neurolologic process associated with HIV, but limited knowledge on their characteristics in the established antiretroviral (ART) era is available. We conducted a case series to evaluate the clinical course of PML and PML-IRIS at our urban safety-net hospital in Atlanta, GA.

Methods. All HIV-positive individuals with a positive JCV DNA PCR in the spinal fluid between May 1, 2013 to June 1, 2017 were identified through electronic medical records (EMR) query. Demographics, symptom presentation, laboratory data, imaging results, treatment, and outcomes were abstracted from the EMR. PML, and PML-IRIS were defined using the American Association of Neurology criteria.

Results. There were 26 patients included in this study, 15 (58%) HIV-positive patients with PML and 11 (42%) with PML-IRIS (2 with a unmasking presentation and 9 with a paradoxical presentation). The average age was 45 years, 23 (88%) were black, and 20 (77%) were male. Mean CD4 and HIV viral load were 65 cells/µL and 4.11 log10 copies/mL, respectively. The most common presenting symptoms were motor weakness (18, 69%), cognitive deficits (15, 58%), and dysarthria (11, 42%). Twenty-four (92%) patients had white matter changes on magnetic resonance imaging (MRI). Enhancement on MRI and presentation with ataxia, dysarthria, or motor or visual deficits were found to be associated with PML-IRIS. Eleven (42%) patients were on ART at the time of diagnosis, and 24 (92%) of patients were on ART afterward. Corticosteroids were used in 9 patients with PML-IRIS and in 3 with PML. Maraviroc was used in 3 patients with PML-IRIS. Presenting with speech deficits or visual changes, having edema on MRI, and developing PML-IRIS were each positively associated with progression to hospice or withdrawal of care, although these values were not statistically significant. Outcomes were dismal with 7/15 (46.7%) patients with PML and 9/11 (81.8%) with PML-IRIS dying or being referred to hospice.

Conclusion. Despite widespread access to ART, patients with PML continue to have poor outcomes, particularly among those who develop PML-IRIS. More research is needed to understand the risks for and prevention of PML-IRIS.

Disclosures. V. Marconi, ViiV: Investigator, Research support and salary. Bayer: Investigator, Research support. Gilead: Investigator, Research support.

2263. HIV-TB Co-Infection in Arizona From 1993 to 2016

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Session: 242. HIV: Opportunistic Infections and other Infectious Complications

Background. Progressive multifocal leukoencephalopathy (PML) and PML immune reconstitution inflammatory syndrome (PML-IRIS) can be a devastating neurolologic process associated with HIV, but limited knowledge on their characteristics in the established antiretroviral (ART) era is available. We conducted a case series to evaluate the clinical course of PML and PML-IRIS at our urban safety-net hospital in Atlanta, GA.

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Conclusion. Despite widespread access to ART, patients with PML continue to have poor outcomes, particularly among those who develop PML-IRIS. More research is needed to understand the risks for and prevention of PML-IRIS.

Disclosures. V. Marconi, ViiV: Investigator, Research support and salary. Bayer: Investigator, Research support. Gilead: Investigator, Research support.

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