previously shown to influence the rate of fibrosis progression. Hepatic fibrosis change was determined using the serum-derived Enhanced Liver Fibrosis (ELF) Index. Four putative genes with polymorphisms that have been previously associated with the development or progression of hepatic fibrosis were evaluated using Taqman SNP genotyping assays. Cytokine assays were performed using Luminox chipsets. Samples were analyzed using Statistix 10.0 using ANOVA and least square regression models.

**Results.** 58 unique subjects were evaluated. The mean age was 38 years, and all were male. 74% were HIV infected and 97% were HCV infected (76.8% coinfection). Controlling for the effect of CCR5, only the TLR7 A -> G polymorphism was predictive of change in the ELF Index. There was no statistically significant predictive difference between genotypes in the other three polymorphisms. Subjects with the TLR7 A allele (n = 47) had an average increase in ELF of 0.79 units, while the G allele (n = 11) had an increase in ELF of 2.1 units (P = 0.008). A regression model identified TLR7 as a key factor in ELF change, as well as HCV/HBV coinfection. Interferon-α2b levels were highly associated (increased, P = 0.0007) with the TLR7 A -> G polymorphism, while RANTES levels were inversely associated (decreased, P = 0.0443) with it.

**Conclusion.** Of the gene polymorphisms investigated, only TLR7 A -> G polymorphism is an independent predictor of development of hepatic fibrosis in HCV/HBV coinfected subjects. The mechanism may involve modulation of inflammatory response pathways.

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360. Advanced Liver Disease in HIV/Hepatitis B Coinfected Patients: Associated with Race, Age, and Comorbidities

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**Session:** 45. HIV Complications: Hepatitis Co-Infections

**Thursday, October 3, 2019: 12:15 PM**

**Background.** Hepatitis B virus (HBV) coinfection is common in people with HIV. Compared with HBV mono-infected individuals, those that are HIV/HBV coinfected have shown evidence of more rapid progression to advanced liver disease (ALD) and increased mortality rate. In this study, we identified characteristics in an HIV/HBV cohort associated with ALD.

**Methods.** We retrospectively examined an HIV/HBV coinfected cohort to determine the prevalence of ALD and its correlation with selected variables. Data were drawn from HIV and HBsAg patients at three HIV clinics in Houston, Dallas, and San Antonio, Texas. Those without chronic HBV were excluded. ALD was defined as cirrhosis, decompensation, and/or hepatocellular carcinoma, as determined by imaging. Variables included demographics, HIV risk factors, comorbidities, HBsAg loss, HepBeAg, CD4+ count, HBV DNA, and RNA viral load. Bivariate analysis was performed using chi-square and student t-test as appropriate; a logistic regression model was used to identify independent associations among significant variables (STATA).

**Results.** Within those with HIV/HBV coinfection (n = 501), 89 (18%) met the criteria for ALD (92% male, 47% Black, 33% White, 16% Hispanic, 73% > 40 years old). Amongst these (n = 89), significant differences were observed with race (P = 0.039), age (P = 0.001), patients identified as MSM/Bisexuals (P = 0.047), diabetes mellitus (DM) (P = 0.01) and hepatitis C virus (HCV) coinfection (P = 0.001). Compared with Whites, Blacks are less likely to have ALD (95% CI 0.27, 0.79, P = 0.004), and those age 40-49 (95% CI 1.23, 10.92, P = 0.016) and >50 (95% CI 1.61, 7.59, P = 0.005) were more likely. The multivariate logistic regression model identified race, age, DM, and HCV coinfection as independent predictors of ALD (Table 1). No differences were seen with gender, insurance, alcohol use, HBsAg loss, HepBeAg status or baseline CD4+ count, HBV DNA, RNA viral load, and AIDS.

**Conclusion.** Increased monitoring for the presence of ADL should be conducted in HIV/HBV patients. Particular attention and surveillance should be paid to those with the following risk factors: Whites, elder age (>50), and comorbidities of DM and HCV. These should be taken into consideration when approaching the development and treatment of ADL in HIV/HBV patients.

**Table 1. Logistic Regression Analysis**

| Variables | Adjusted Odds Ratio | 95% CI | P value |
|-----------|---------------------|--------|--------|
| Race/Ethnicity |                      |        |        |
| White | Reference | | | |
| Black | 0.51 | 0.29, 0.90 | 0.02 |
| Hispanic | 0.73 | 0.34, 1.55 | 0.41 |
| Other | 1.15 | 0.33, 3.98 | 0.82 |
| Age group |                      |        |        |
| <30 years | Reference | | | |
| 30-39 years | 1.46 | 0.46, 4.69 | 0.52 |
| 40-49 years | 2.87 | 0.86, 8.03 | 0.06 |
| >50 years | 3.79 | 1.16, 12.38 | 0.03 |
| Diabetes | 1.98 | 1.03, 3.83 | 0.03 |
| Hepatitis C | 3.2 | 1.72, 5.94 | <.001 |

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(viral load, CD4 count, antiretroviral treatment (ART)), and HCV (viral load level and antibody, genotype, alanine transaminase, liver fibrosis, liver cirrhosis, referral, and treatment).

**Results.** A total of 41 patients met our inclusion criteria. The mean age was 52 years. Of these HIV/HCV coinfected women, 27 (66%) were African American and 14 (34%) Caucasian. 18 (44%) had history of injection drug use. Thirty-nine out of 41 (95%) were linked to HIV care and on antiretroviral therapy with 36 (88%) with CD4 count >200. Twenty-three out of 41 (56%) was referred for HCV treatment but only 11 (26%) co-infected patients received treatment for HCV.

**Conclusion.** In this cohort of HCV/HIV coinfected women, only 26% of the women received HCV treatment. Some of the barriers include access to providers, linkage to care and behavioral and socioeconomic factors. The lack of timely appropriate HCV care in this underserved high-risk population is alarming especially in the current era of highly effective direct-acting antiviral therapy for HCV. Despite improved HIV care, further work needs to focus on optimizing HCV screening, linkage and treatment uptake in order to overcome multiple barriers to HCV elimination in this patient population.

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**363. Characterization of HIV/HBV Co-Infected Patients at an Outpatient HIV Clinic and Evaluation of Management Practices as a Measure for Quality Improvement**

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**Session:** 45. HIV Complications: Hepatitis Co-Infections

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**Background.** About 10% of patients living with the human immunodeficiency virus (HIV) are coinfected with chronic hepatitis B infection (HBV). Individuals with HIV are at increased risk of having HBV progress to chronic infection. Current guidelines recommend at least two active agents against HBV in HIV/HBV coinfected patients one of which must include tenofovir. Due to the increased risk of developing fibrosis and hepatocellular cancer (HCC) in this population, current guidelines recommend yearly evaluation of the liver function with imaging, liver function tests (LFTs), and vaccination against Hepatitis A. In our study, we sought to determine the characteristics of dual-infected patients in our clinic and our management practices in accordance with guidelines.

**Methods.** A retrospective, observational, single-center cohort study in adults coinfected with HIV and chronic HBV from 2013 to 2018 at an urban HIV outpatient practice. Patients with acute hepatitis B infection and isolated hepatitis B core antibody were not included in our study. The study assessed the management practices evaluating appropriate medication for HBV, screening for hepatocellular cancer, and Hepatitis A vaccination.

**Results.** Of the 3,248 HIV patients seen at our clinic within this period, 128 patients (3.9%) were HBV coinfected. Only active patients (N = 81) were included in the quality improvement analysis. Although 90% of coinfected patients were on appropriate anti-HBV therapy, and 96% had annual LFTs done, only 39.5% had documented hepatitis A vaccination and only a quarter (25.9%) had HCC screening done at the recommended interval.

**Conclusion.** Long-term management of HIV/HBV involves preventing and monitoring for liver failure and HCC. Based on our clinic data, our management practices for ensuring that our patients receive imaging for HCC will need to be revised.

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