Race/Ethnicity and Risk of NAFLD and Clinically Significant Fibrosis in Persons Living with HIV

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Introduction

- Racial and ethnic differences in non-alcoholic fatty liver disease (NAFLD) prevalence are well described in the general population, with Hispanics having the highest and African Americans having the lowest NAFLD prevalence.
- Whether similar disparities exist in persons with HIV (PWH) with NAFLD is largely unknown.

Aims

- We aimed to investigate racial and ethnic differences in the prevalence of NAFLD and clinically significant fibrosis (CSF) among PWH.

Methods

- This cross-sectional analysis included participants ≥ 18 years of age prospectively enrolled in two U.S. multicenter studies from 2018-2023 who had a documented history of HIV on antiretroviral therapy with HIV-1 RNA < 200 copies/mL.
- Vibration controlled transient elastography (VCTE, Fibroscan®) was performed; racial/ethnic group was self-reported as non-Hispanic White (NHW), non-Hispanic Black (NHB), or Hispanic.
- NAFLD was defined by a VCTE controlled attenuation parameter (CAP) score ≥263 dB/m in the absence of excessive alcohol consumption and other causes of liver disease.

Methods

- CSF was defined as a VCTE liver stiffness measurement (LSM) ≥8 kPa.
- Multivariable logistic regression analysis was performed to examine associations between race/ethnicity and the presence of NAFLD and CSF.

Results

- The study population included 1067 PWH with a mean age of 52 years and 73% male sex at birth.
- 515 (48%) of participants were NHB and 239 (22%) were Hispanic.
- The prevalence of NAFLD and CSF by race/ethnicity is shown in Table 1.

Table 1. Prevalence of NAFLD and CSF by Race/Ethnicity.

	NHW	NHB	Hispanic	P-value
NAFLD	57%	44%	**65%**	< 0.001
CSF	**22%**	11%	15%	< 0.001

- NAFLD prevalence was highest for Hispanic and lowest for NHB persons.
- The prevalence of CSF was highest for NHW compared to Hispanic and NHB persons.

Tables

- After adjusting for clinically relevant variables (Table 2), NHB persons had a lower risk of both NAFLD and CSF compared to NHW persons.
- The adjusted analysis showed no differences in the risk of NAFLD or CSF between Hispanics and NHW persons.

Table 2. Independent association of NAFLD and CSF with Race/Ethnicity from multivariable logistic regression.

	NAFLD	CSF
	OR (95% CI)	OR (95% CI)
Race/Ethnicity*		
NHW	*Ref.* (1)	*Ref.* (1
NHB	0.43 (0.28, 0.66)	0.42 (0.27, 0.68)
Hispanic	1.23 (0.78, 1.96)	0.74 (0.44, 1.26)

*adjusted for age, sex at birth, BMI, Type 2 DM, hypertension, ALT, triglycerides, and platelet count.

Conclusion

- In this large, multi-ethnic cohort study of persons with well-controlled HIV, non-Hispanic Black participants had approximately 60% lower odds of having NAFLD and CSF compared to non-Hispanic Whites.
- Further studies are needed to determine the factors associated with racial and ethnic differences in NAFLD in PWH, including genetic variation.

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Disclosures

- None for this abstract