Chronic liver disease assessment in HIV mono-infected individuals: HeAL (HIV non-virAl Liver disease) Study Update

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Introduction

- Chronic liver disease (CLD) is a major cause of morbidity and mortality in people living with HIV (PLWH)
- Following advances in viral hepatitis treatment, future CLD is likely to be due to non-viral aetiologies
- Potential contributors include
  - Alcohol
  - Metabolic syndrome
  - Antiretrovirals

Aims

Investigate the prevalence and predictors of CLD in PLWH with abnormal liver function

Methods

- Inclusion criteria:
  - PLWH
  - Negative viral hepatitis serology
  - Elevated transaminases over 6 months
- Consenting individuals prospectively assessed by:
  - AUDIT questionnaire
  - Screening for metabolic syndrome
  - Transient elastography (Fibroscan ®)
- Study definitions
  - Significant hepatic steatosis (SHS): controlled attenuation parameter (CAP) ≥237dB/m
  - Significant hepatic fibrosis (SHF)liver stiffness measurement (LSM) ≥7.1kPa
  - Cirrhosis: LSM ≥11.5kPa

Results

- Of 429 eligible individuals, 237 recruited since 2015
  - Mean age 52.3±9.6 years,
  - 92.8% male,
  - 96.6% with undetectable viral load,
  - Mean HIV duration 15.8±7.5 years
- Overall prevalence of SHS was 63% (n=149), and SHF was 21% (n=49), of whom 36 (73%) had SHS and 18 (37%) had cirrhosis.
- On binary logistic regression, HDL and AUDIT score were significantly associated with SHF whereas CD4 baseline, HIV duration, BMI, hypertension, diabetes, and duration on ARV were not.
- Predictors of SHS included BMI, HDL and AUDIT score.
- No classical risk factors were identified in 8 (16%) individuals with SHF but they had significantly shorter HIV duration and higher peak ALT compared to those with risk factors for SHF (Table 1).

	No risk factors n=8	Risk factors n=41	Significance
Age (years)	45.5±9.6	52.6±9.7	P=0.069
HIV duration (years)	9.1±4.5	16.0±7.5	P=0.006*
Baseline CD4 (10^6/L)	421±240	425±649	P=0.407
ALT peak (iu/L)	112.6±79.6	70.2±40.2	P=0.048*

Conclusions

- There is high liver disease burden in PLWH with elevated transaminases; nearly 2/3 having SHS and 1/5 SHF.
- MS risk factors and alcohol use appear to predict both SHS and SHF
- However, one sixth of individuals with SHF have no identifiable classical risk factors
- This raises the real possibility of immune dysregulation or direct hepatotoxicity of HIV

Recommendations

- Screening strategies for CLD in PLWH alone should be considered to ensure timely Hepatology input
- Emphasis to be placed upon appropriate counselling regarding alcohol intake and weight loss for these individuals

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