Screening for steatotic liver disease in Australians living with Human Immunodeficiency Virus using transient elastography

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Background:
People living with Human Immunodeficiency Virus (PLWH) are at risk of steatotic liver disease (SLD), associated with increased mortality. HIV confers additional risk to metabolic risk factors such as type 2 diabetes (T2D), and obesity. There are no specific guidelines on how to screen for SLD in PLWH, and no published Australian data of Transient Elastography (TE) with controlled attenuation parameter (CAP) assessing both steatosis and fibrosis.

Methods:
This study involves two centres in Victoria from Aug 2025 to March 2026. Experienced operators performed TE on consecutive patients attending outpatient HIV clinic. Steatosis was defined as CAP>263db/m^2. “At risk” fibrosis was defined as LSM ≥8.0kPa. We collected information on antiretroviral drugs, blood tests within 3 months of TE and body mass index (BMI). FIB-4 score ≥1.3 was considered at risk for significant fibrosis with LSM ≥8.0kPa as comparator. Those with co-existing liver disease other than fatty liver, significant alcohol consumption, liver mass lesions and contraindications to TE (ascites, implantable cardiac defibrillators) were excluded.

Results:
Fifty-nine PLWH completed TE assessments with 46% (27/59) having SLD, and 5% (3/59) having significant fibrosis. BMI was associated with SLD (30 kg/m^2 vs 24 kg/m^2, p=0.00). Age (49y vs 47y, p=0.25), HIV duration (12 yrs vs 8 yrs, p=0.09), CD4+ T-cell count (626 vs 633, p=0.26), Abacavir use (22% vs 6%, p=0.13) and T2D (19% vs 6%, p=0.23) were not associated. The most common drug regimen was Bictegravir/Emtricitabine /Tenofovir combination in both the SLD and non-SLD groups (56% vs 41%, p=0.30). FIB-4 had a negative predictive value of 100% but the low prevalence of significant fibrosis limits precision.

Conclusion:
Screening by Transient elastography in adults living with HIV showed a high prevalence of SLD but most didn't have "at risk" fibrosis. Steatosis was associated with high BMI, rather than HIV-specific factors.

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