High rates of elevated liver transaminases in people with HIV: metabolic dysfunction-associated liver disease an underdiagnosed condition?

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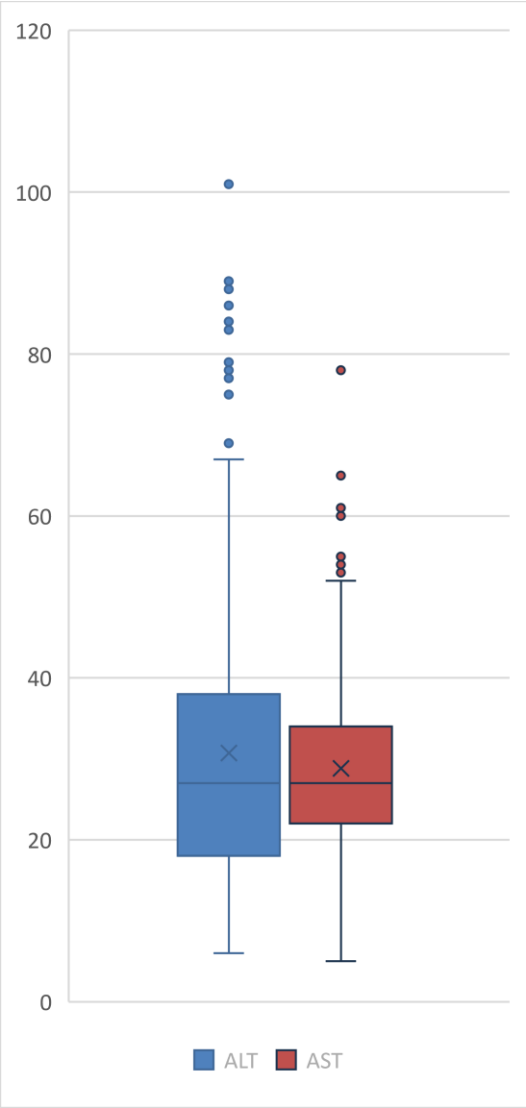
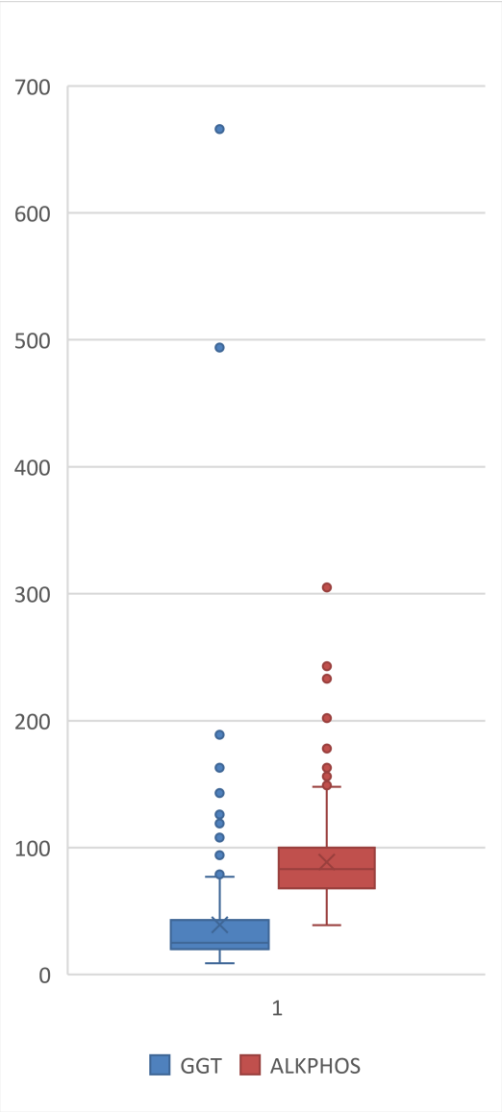
Background/Purpose:
There has been high reported prevalence of metabolic dysfunction-associated steatotic liver disease (MASLD) in people living with HIV (PLWH) of up to 33%, with limited treatment options. Alanine aminotransferase (ALT) and aspartate aminotransferase (AST) are routinely tested in PLWH. Unexplained ALT/AST derangement may indicate MASLD in people with metabolic risk factors. We aimed to assess prevalence of liver function test (LFT) derangement in PLWH at our centre, addressing potential under-recognition of MASLD in our cohort.

Approach:
We retrospectively analysed results of PLWH managed at The Royal Melbourne Hospital who had liver function tests performed between 01/10/2022 and 30/09/2023. History of hepatitis B/C based on active HBV/HCV viral load monitoring, HbA1c, and LDL cholesterol was also assessed. BMI assessment was hindered by incomplete data.

Outcomes/Impact:
259 patients (199 males, 60 females) were included with mean age of 49.5 years. 14 had hepatitis B-coinfection with 1 patient viraemic. None had active hepatitis C coinfection. 77 patients had ALT/AST derangement of which 16 (21%) had a HbA1c greater than 41. 36 (47%) had LDL measurement >2.0.

Risk Factor	**Number of patients** (N=259)	**ALT/AST derangement** (%)
All Patients	259	77 (29.7%)
Age >50	139	39 (28.1%)
Age <50	120	38 (31.7%)
Male Sex	199	65 (32.7%)
Female Sex	60	12 (20%)
Hepatitis B Coinfection	14	4 (28.6%)
No Hepatitis B Coinfection	245	73 (29.8%)
HbA1c >41	45	16 (36.6%)
No diabetes	118	36 (30.5%)
LDL >2.0	114	36 (31.5%)
LDL <2.0	116	37 (31.9%)





Innovation and Significance:
Despite low viral coinfection rates, our cohort showed significant LFT abnormalities. Many patients displayed metabolic syndrome risk factors, but data gaps remain, particularly in BMI records and frequency of liver ultrasound screening. While recognizing the limitations of LFT in diagnosing MASLD, our findings advocate for increased screening in this population. Emerging therapies like GLP-1 agonists emphasize the importance of early MASLD detection in PLWH.

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