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Background

Liver disease remains a leading cause of morbidity and mortality among patient with HIV infection. Nonalcoholic fatty liver disease (NAFLD) is an emerging concern for patients living with HIV. The aim of this review is to examine the current literature and provide an accurate estimate of the prevalence of NAFLD and fibrosis in patients with HIV mono-infection.

Methods

This review was performed in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Statement (PRISMA). We performed a systematic search of Pubmed and Embase databases to identify studies reporting the prevalence of NAFLD and/or fibrosis in patients with HIV mono-infection. To be considered eligible for inclusion studies should met the following criteria: 1) exclude patients who had concurrent HCV or HBV infection, 2) exclude patients with heavy alcohol use (as defined by each study), 3) HIV patients must be unselected, 4) diagnosis of steatosis and fibrosis should be based on imaging and criteria should be reported. Our primary outcome of interest was the prevalence of NAFLD and fibrosis in unselected HIV mono-infected patients. To estimate the pooled prevalence of NAFLD and fibrosis we performed a random effects meta-analysis.

Results

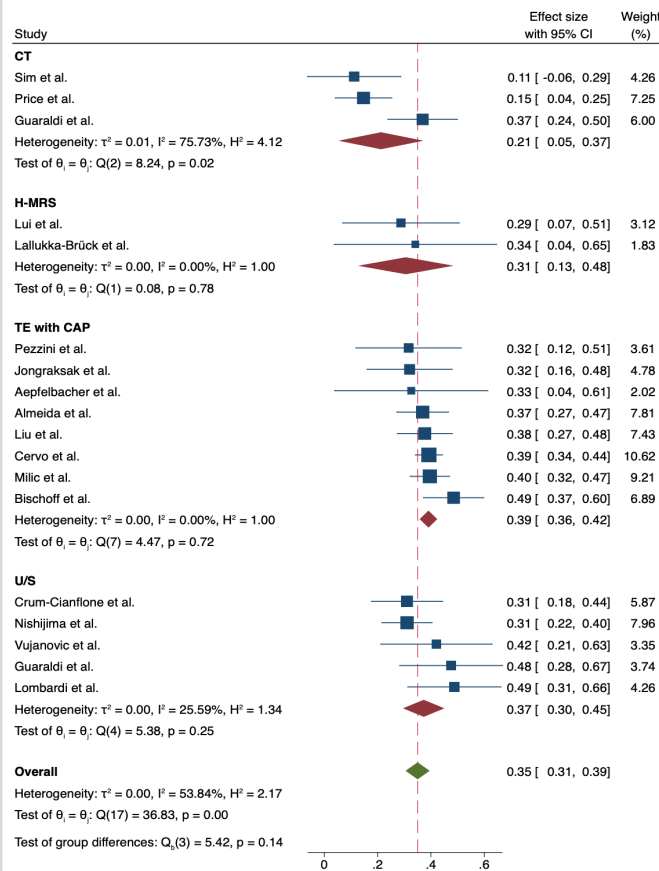


Fig 1. Pooled prevalence of NAFLD in PLWH mono-infection, sub-grouped by diagnostic method

Our systematic search yielded 3078 studies of which 122 were eligible for full text review. A total of 20 studies met our eligibility criteria and were included in the meta-analysis. The overall pooled prevalence of NAFLD among HIV mono-infected patients was 34.2% (95% CI: 29.7%-38.9%), but significantly varied based on the diagnostic method used (Figure 1). The prevalence of moderate to severe hepatic steatosis was 15.5% (95% CI: 8.9-23.5%). The overall pooled prevalence of fibrosis (defined as liver stiffness measurement $>/ 7.1$ kPa on transient elastography) was 12.3% (95% CI: 10.1%-14.7%) (Figure 2).

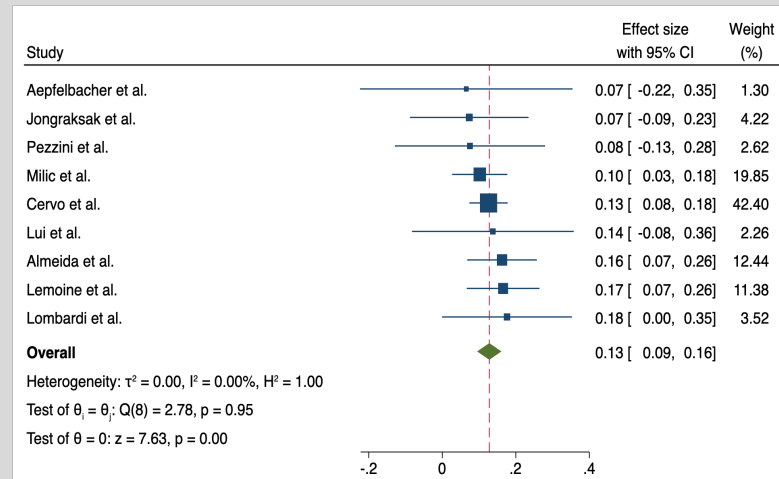


Fig 2. Pooled prevalence of significant liver fibrosis (METAVIR \geq F2) in PLWH mono-infection

Conclusion

Our study presents the most up-to-date information on the prevalence of NAFLD and fibrosis in patients with HIV mono-infection. Our results show that the prevalence of NAFLD and fibrosis remain concerningly high among HIV mono-infected individuals. Several factors, including traditional NAFLD risk factors and HIV related factors, such as lipodystrophy and antiretroviral therapy, are probably contributing to these findings. Future studies should better characterize these factors, while screening for NAFLD and fibrosis should be considered in HIV mono-infected individuals.