

Poster presentation

Screening for liver fibrosis in HIV-mono-infected patients with increased ALT comparing FibroScan with FIB-4

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Background

Elevated ALT values are frequently observed in HIV-mono-infected patients. Recent studies have reported cases of cryptogenic liver cirrhosis in HIV+ individuals. Other possible explanations are non-alcoholic/alcoholic steatohepatitis and drug toxicity. We have used two non-invasive methods, liver elastometry (FibroScan) and a serologic fibrosis index (FIB-4), for liver fibrosis screening in a single centre.

Methods

HIV-infected patients without hepatitis B and C co-infection with at least one elevated ALT in 2007/2008 (males >50 U/l, females >35 U/l) were selected for liver elastometry by FibroScan (Echosens, Paris). Antiretroviral medication, co-medication, alcohol consumption, smoking, recreational drug use and BMI were assessed. Liver stiffness was classified as <7.2 kPa (no/minimal fibrosis), 7.2–12.5 kPa (moderate fibrosis), >12.5–17.6 kPa (severe fibrosis), >17.6 kPa (cirrhosis). FibroScans were performed by two trained and experienced investigators (high inter-observer-correlation, $r = 0.80$, $p < .05$). FIB-4 index ($\text{age}[\text{years}] \times \text{AST}[\text{U/l}] / (\text{platelets} [10^9/\text{l}] \times \text{ALT}^{0.5} [\text{U/l}])$) was used for serologic fibrosis assessment. For statistical evaluation, SPSS 15.0 was used.

Summary of results

Out of 1,098 HIV-infected individuals, 227 had increased ALT without hepatitis co-infection; 81 patients were consecutively screened by FibroScan. A valid elastometry was obtained in 79/81 (98%) patients. 76/81 were male, median age was 45 years (27–71 years), median BMI 24.6

kg/sqm (19.1–33.7 kg/sqm), median ALT 60 U/l (38–144 U/l). 70/81 (86%) were on antiretroviral therapy with median duration of 76 months. HIV-RNA was <40 copies/ml in 63/70 treated patients (90%). Median CD4+ cells were 618/ μl (130–1635 cells/ μl). Alcohol consumption was >24 g/day (males) or >12 g/day (females) in 11% of patients, 41% were smokers, and 17% reported consumption of recreational drugs. Median liver stiffness was 5.2 kPa (3.1 – 8.8 kPa). No/minimal fibrosis was found in 70/79 (89%), moderate fibrosis in 9/79 (11%). No patient had severe fibrosis or cirrhosis. With FIB-4 62/81 (77%) patients had no/minimal fibrosis, 18/81 (22%) moderate fibrosis and 1/81 (1%) advanced fibrosis.

Conclusion

In this ongoing study about 20% of HIV-mono-infected patients had elevated ALT. Advanced liver fibrosis was rare in this cohort of HIV-mono-infected individuals, and there is good agreement between FibroScan and FIB-4.