Poster presentation

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Risk factors for advanced liver fibrosis in HIV-infected individuals: role of the metabolic syndrome

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Background
Liver damage in HIV patients may result from multiple factors. The availability of reliable non-invasive tools to measure liver fibrosis, such as transient elastometry (FibroScan), has permitted the screening of large populations.

Methods
Cross-sectional study of all HIV outpatients who underwent examination by FibroScan at one HIV reference clinic since 2005. Advanced liver fibrosis (ALF) was defined as hepatic stiffness >9.5 kiloPascals, which corresponds to Metavir stages F3–F4 in the liver biopsy. Main demographics, alcohol abuse, antiretroviral exposure, biochemistry, HOMA index, immune and viral parameters, and hepatitis B or C status were evaluated.

Summary of results
A total of 681 consecutive HIV patients (64% injecting drug users; mean age 43 years; 78% male; 77% on antiretroviral therapy) had a valid FibroScan evaluation. Main characteristics: mean CD4 count 524 (309) cells/mm3, plasma HIV-RNA <50 cp/mL 72%, HBsAg+ 8.5%, HCV-RNA+ 60%, mean BMI 23.6 (3.9) kg/m2, past and current alcohol abuse (>60 g/d) 33% and 10%, respectively. ALF was diagnosed in 215 (32%).

In the univariate analysis, significant differences were found between patients with and without ALF for mean age (44 vs. 42 years), risk behaviour (IDU 81 vs. 54%, MSM 11 vs. 33%, heterosex 6 vs. 12%), past alcohol abuse (50 vs. 26%), mean CD4+ count (469 vs. 550 cells/mm3), HCV-RNA+ (77 vs 52%), ALT >50 IU/L (29 vs 9%), mean plasma glucose (127 vs. 116 mg/dL), triglycerides (223 vs. 172 mg/dL), and total cholesterol (177 vs. 188 mg/dL), HOMA index (4.5 vs. 3.2), past exposure to ddI +/- d4T (51 vs. 40%), and mean months on NVP (11 vs. 16), LPV (13 vs. 8), atazanavir (7 vs. 5), tenofovir (21 vs. 18) as well as any antiretroviral (85 vs. 78).

In a multivariate model (OR, 95% CI), older age (1.08, 1.04–1.13), past alcohol abuse (2.62, 1.60–4.28), exposure to ddI and/or d4T (1.94, 1.20–3.16), higher HOMA index (1.25, 1.04–1.51) and elevated ALT (1.05, 1.03–1.06) were all independently associated with ALF; in contrast, chronic hepatitis B or C were no longer associated with ALF.

Conclusion
Former alcohol abuse and non-alcoholic steatohepatitis as a result of insulin resistance and/or exposure to dideoxy-nucleosides represent an emerging cause of ALF in HIV patients.

References
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