

Poster Sessions – Abstract P190

Liver fibrosis is associated with cognitive impairment in HIV-positive patients

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Introduction: The aim of our study was to investigate the potential relationship between liver fibrosis (LF) and cognitive performance in HIV+ patients.

Materials and Methods: We performed a cross-sectional cohort study by consecutively enrolling HIV+ patients during routine outpatient visits at two clinical centres in Italy. Subjects with decompensated liver disease were excluded. All subjects underwent a comprehensive neuropsychological battery exploring memory, attention, psychomotor speed and language; cognitive impairment was defined as at least two abnormal [1.5 SD below the mean for appropriate norms] cognitive domains. LF was explored by calculating FIB4 index; in a subgroup of patients, LF was also assessed by transient elastography. Factors associated with cognitive impairment were investigated by logistic regression models.

Results: A total of 413 patients [77% males, median age 46 (IQR 39–52), 17% with past AIDS-defining events, 19% past IDU, 3% with diabetes, 94% on cART, 90% with HIV RNA <50 copies/mL, 18% co-infected with HCV] were enrolled. Seventeen patients (4%) had FIB4 >3.25 and 14/129 (3%) had liver stiffness >14KPa. Forty-seven patients (11%) were diagnosed with cognitive impairment. At multivariate analyses patients with FIB4 >1.45 showed a higher risk of cognitive impairment in comparison with those with lower values (OR 2.19, 95% CI 1.02–4.72; $p=0.044$) after adjusting for education (OR 0.79, 95% CI 0.71–0.88; $p<0.001$), past IDU (OR 1.69, 95% CI 0.67–4.23; $p=0.264$), diabetes (OR 2.35, 95% CI 0.62–8.86; $p=0.207$), HIV RNA <50 copies/mL (OR 0.47, 95% CI 0.19–1.14; $p=0.095$) and HCV co-infection (OR 0.88, 95% CI 0.33–2.39; $p=0.807$). Analyzing any single cognitive domain, a higher risk of abnormal psychomotor speed was associated with fibroscan score >14KPa in comparison with fibroscan score <7KPa (OR 285.07; 95% CI 2.42–33574.06; $p=0.020$) after adjusting for education (OR 0.54, 95% CI 0.31–0.92; $p=0.024$), age (for 10 years increase) (OR 2.03, 95% CI 0.55–7.53; $p=0.288$), past IDU (OR 4.43, 95% CI 0.35–7.57; $p=0.526$), HIV RNA <50 copies/mL (OR 0.01, 95% CI 0.00–0.18; $p=0.003$), HIV history (for 1 year increase) (OR 0.96, 95% CI 0.83–1.12; $p=0.641$), CD4 cells count at nadir (OR 1.10, 95% CI 0.56–2.16; $p=0.779$), and HCV co-infection (OR 0.06; 95% CI 0.00–1.93; $p=0.113$).

Conclusions: In HIV-infected patients higher LF, estimated through non-invasive methods, is associated to a higher risk of cognitive impairment.

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