



Poster

Session/Topic: Clinical Hepatitis

N. Title:

P 20 **Evaluation of mild cognitive dysfunction by Montreal Cognitive Assessment test in co-infected HIV-HCV patients treated with the new direct acting antivirals (DAAs)**

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Abstract:

Background and aims: HIV and HCV replicate in human brain and are detectable in the cerebro-spinal fluid of infected patients; they are also implicated in the development of neuro-cognitive impairment, both in mono-infected than in HIV-HCV co-infected patients. In this study, we investigated changes in neurocognitive status of HIV-HCV patients undergoing antiviral treatment using the Montreal Cognitive Assessment (MoCA) test.

Methods: we included co-infected HIV-HCV patients treated with DAAs from 2016 to 2017. To examine changes in neurocognitive status we used MoCA at baseline (before starting therapy) and 6 months after the end of treatment. We evaluated several cognitive domains such as visual-constructional skills, executive functions, attention and concentration, memory, language and orientation. The result of MoCA was the sum of the scores in each area for a maximum of 30 points. We considered normal a score $\geq 26/30$.

Results: We enrolled 32 patients, 26 males (81,3%), mean age 52.9 years (range 44 - 62), genotype 1 10 (31,3%), 10 patients (31,3%) with cirrhosis, without encephalopathy, 14 patients (43,8%) treated with Peg-Interferon in the past. Different regimes with DAAs \pm ribavirin depending on HCV genotype and liver disease severity were used. All patients were on antiretroviral treatment and HIV RNA was under 37 copies/ml at the baseline. We performed MoCa in all patients at baseline and in 15 patients after the end of therapy. All of them achieved a sustained virological response (SVR). Post-treatment MoCA score improved in 10 (66,7%) patients ($p < 0.04$) with achieving the normal threshold in 66.7% vs 26.7% ($p = 0.0001$) at baseline. The average score at MoCA post treatment was 26.5 whereas at the baseline was 23.9 ($p < 0.0088$). The average MoCA score improved in almost all areas, but visuo-constructional skills. Memory was the most affected area at the baseline with a score at least 3/5 in 53% of patients vs 74% of patients after SVR. In two exercises (naming and Backward Digit Span) 100% of patients achieved the highest score in post treatment tests, compared to 80-85% of baseline.

Conclusions: Although our study is limited by the low number of patients tested, the results suggest the importance of treatment with antivirals direct acting not only for the eradication of HCV, but also for their role in the cognitive decline and the possibility that they could improve neurocognitive functions, such as execution and memory, in co-infected HIV-HCV patients.