

moderately worse subjective cognition ($d=0.546$ [95% CI (0.054, 1.038)], $p=0.030$).

Severity comparison: When comparing hospitalized and not hospitalized groups, patients who were hospitalized reported modestly worse subjective cognition ($d=-0.241$, [95% CI (-0.703, 0.221)], $p=0.30$), though the difference was not statistically significant.

Normative data comparison: When all non-severe groups (mild and moderate; $k=12$) were compared to the normative comparison groups, there was a large, statistically significant effect ($d=-1.06$, [95% CI (-1.58, -0.53)], $p=0.001$) for self-report of worse subjective cognitive functioning.

Conclusions: There was evidence of subjective report of worse cognitive functioning following non-severe COVID-19 infection. Future work should explore relationships between objective neuropsychological functioning and subjective cognitive difficulties following COVID-19.

Categories: Infectious Disease (HIV/COVID/Hepatitis/Viruses)

Keyword 1: cognitive functioning

Keyword 2: infectious disease

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69 Influence of Cardiovascular Risk Factors on Neuropsychological Trajectories in Black/African American Adults Living with HIV

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Objective: Human immunodeficiency virus (HIV) type 1 (HIV-1), cardiovascular disease, and HIV-associated neurocognitive disorders (HAND) disproportionately affect Black/African American individuals compared to other racial and ethnic groups. Understanding the mechanisms of cognitive health disparities is essential for developing policy and health interventions to combat such disparities.

Cardiovascular risk factors/diseases are common comorbidities that likely contribute to cognitive health disparities among Black/African American people living with HIV (PWH), but their impacts on cognition longitudinally in this population are unclear. The current study examines the relationship between cardiovascular risk and cognitive functioning over time in Black/African American adults living with HIV.

Participants and Methods: A sample of 122 Black/African American adults with HIV (ages 25-68, $M=51.8$, $SD=7.7$; 98% on antiretroviral therapy; 91% with undetectable viral load) were selected from the Drexel/ Temple Comprehensive NeuroHIV Center, Clinical and Translational Research Support Core (CTRSC; based at Drexel University College of Medicine) Cohort. They completed longitudinal visits (300 total visits, average follow-up time=4.9 years) that included clinical interviews, medical record review, biometric measurements, and comprehensive neuropsychological assessments. Cardiovascular risk factors of interest were body mass index (BMI), waist-to-height ratio (WHtR), and a total vascular risk burden score (VBS) representing five risk factors: obesity, central obesity, diabetes, hyperlipidemia, and hypertension. Based on a prior principal component analysis, three cognitive domains were examined: (1) verbal fluency, (2) visual memory/visuoconstruction, and (3) motor speed/executive functions. Mixed models were used to examine domain-specific cognitive trajectories in relation to baseline cardiovascular risk factors and changes in cardiovascular risk factors.

Results: Overall, cognitive test performance improved over time ($p<.003$). Baseline VBS was marginally associated with longitudinal change in verbal fluency ($p=.06$). Participants with low baseline VBS (0-1 risk factors) demonstrated improvement in verbal fluency ($p=.002$), while those with higher VBS (2-5 risk factors) demonstrated stability in verbal fluency. In contrast, greater increases in BMI and in WHtR predicted more favorable trajectories in motor speed/executive function (both $p<.001$). Patients with increasing BMI over time improved in this domain ($p=.02$), while patients with stable or decreasing BMI did not. A similar pattern was observed for WHtR change. No vascular risk factors were associated with trajectories of visual memory/visuoconstruction.

Conclusions: Higher total vascular risk burden was associated with less favorable verbal

fluency trajectories, reflecting the negative cognitive consequences of disorders such as diabetes, hyperlipidemia, and hypertension. Unexpectedly, greater increases in BMI and WHtR were associated with more favorable trajectories in motor speed and executive functioning. In this population, weight gain may be a proxy for other positive health factors, such as immune reconstitution, which will be examined in future analyses. Taken together, cardiovascular risk factors have heterogeneous associations with cognitive trajectories, emphasizing the importance of examining the mechanisms of these varying relationships. Future research will examine how social determinants of health, such as racial/ethnic discrimination, contribute to disparities in cardiovascular risk factors and cognitive outcomes.

Categories: Infectious Disease
(HIV/COVID/Hepatitis/Viruses)

Keyword 1: HIV/AIDS

Keyword 2: cognitive functioning

Keyword 3: cardiovascular disease

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70 Visual Attention and Emotion Recognition Deficits in Patients with Cerebellar Tumors

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Objective: Social cognition refers to processing, analyzing and understanding information about emotions and social situations. Many studies indicate a frequent deficit of these functions in people with tumors of the cerebellum. Visual search is an important attention process prior to information processing. It also mediates the relationship between cognitive function (attention) and social cognition. There are numerous data showing that disorders of various aspects of attention are fairly common in patients with tumors of the cerebellum. The question arises whether there is any relationship between these functions. The purpose of this study was to find out if there is a relationship

between visual search performance and the ability to recognize emotions.

Participants and Methods: The study included 19 patients with the cerebello-pontine angle (CPA) tumors (mean age = 38.84, SD = 14.27; 10 women and 9 men) and 19 healthy controls (mean age 38.26, SD = 10.40; 10 women and 9 men). The research group consisted of patients from the Department of Neurosurgery, UCK Medical University of Warsaw, the control group was healthy. The groups did not differ demographically.

At the beginning, the respondents completed a questionnaire in which they were asked about demographic data and health status. Then, a series of 40 boards presenting the letters T in two colors, blue and orange, scattered in different planes was presented. The letters were right or upside down. The test person's task was to find and click the correctly positioned orange T letter as quickly as possible. Then, a series of 56 photos of faces representing seven different emotions was presented (happiness, anger, sadness, surprise, disgust, fear and a neutral face). The test person's task was to decide which of the emotions mentioned under the photo were presented by the presented face.

Results: The results indicated that patients with tumors in the CPA area had a longer mean reaction time and lower accuracy when performing visual searches than subjects from the control group. Likewise, there were longer times and lower accuracy in the emotional recognition task. Moreover, in the group of patients with CPA tumor, the response time during visual search was negatively associated with the correctness of the response in visual search ($\rho = -0.57$, $p < 0.05$). There were also negative correlations between the reaction time and the correctness of recognizing particular emotional states: anger ($\rho = -0.48$, $p < 0.05$), disgust ($\rho = -0.62$, $p < 0.01$) and neutral ($\rho = -0.64$, $p < 0.01$). The correctness of answers in visual search correlated positively with the accuracy of emotion recognition ($\rho = 0.72$, $p < 0.01$). None of the above-mentioned relationships were found in the control group.

Conclusions: The obtained results indicate a relationship between the quality of visual attention and the ability to recognize emotions in people with cerebellar lesions. In order to better understand this phenomenon, it is necessary to continue research in this field.

Categories: Medical/Neurological Disorders/Other (Adult)