common in HIV-associated neurocognitive disorders (HAND). The neuropathological hallmarks of aMCI/AD are amyloid-β42 (Aβ42) plaque and phosphorylated tau (p-tau) accumulation. Neurofilament light chain protein (NfL) is a marker of neuronal injury in AD and other neurodegenerative diseases. In this study, we assessed the prognostic value of the CSF AD pathology markers of lower Aβ42, and higher p-tau, p-tau/Aβ42 ratio, and NfL levels to identify an aMCI-like profile among older PWH and differentiating it from HAND. We assessed the relationship between aMCI and HAND diagnosis and AD biomarker levels
Participants and Methods: Participants included 74 PWH (Mean age=48 [SD=8.5]; 87.4% male, 56.5% White) from the National NeuroAIDS Tissue Consortium (NNTC). CSF Aβ42, Aβ40, p-tau and NfL were measured by commercial immunoassay. Participants completed a neurocognitive evaluation assessing the domains of learning, recall, executive function, speed of information processing, working memory, verbal fluency, and motor. Memory domains were assessed with the Hopkins Verbal Learning Test-Revised and the Brief Visuospatial Memory Test-Revised, and aMCI was defined as impairment (<1.0 SD below normative mean) on two or more memory outcomes among HVLT-R and BVMT-R learning, delayed recall and recognition with at-least one recognition impairment required. HAND was defined as impairment (<1.0 SD below normative mean) in 2 or more cognitive domains. A series of separate linear regression models were used to examine how the levels of CSF p-tau, Aβ42, p-tau/Aβ42 ratio, and NfL relate to aMCI and HAND status while controlling for demographic variables (age, gender, race and education). Covariates were excluded from the model if they did not reach statistical significance.
Results: 58% percent of participants were diagnosed with HAND, 50.5% were diagnosed with aMCI. PWH with aMCI had higher levels of CSF p-tau/Aβ42 ratio compared to PWH without aMCI (β=.222, SE=.001, p=.043) while controlling for age (β=.363, p=.001). No other AD biomarker significantly differed by aMCI or HAND status.
Conclusions: Our results indicate that the CSF p-tau/Aβ42 ratio relates specifically to an aMCI-like profile among PWH with high rates of cognitive impairment across multiple domains in this advanced HIV disease cohort. Thus, the p-tau/Aβ42 ratio may have utility in disentangling aMCI from HAND and informing the need for further diagnostic procedures and intervention. Further research is needed to fully identify, among a broader group of PWH, who is at greatest risk for aMCI/AD and whether there is increased risk for aMCI/AD among PWH as compared to those without HIV.

Categories: Infectious Disease (HIV/COVID/Hepatitis/Viruses)
Keyword 1: HIV/AIDS
Keyword 2: dementia - Alzheimer's disease
Keyword 3: mild cognitive impairment
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58 Emotional Functioning in Long COVID Neuropsychological Evaluations: Comparison to Post-Concussion Syndrome Using the Personality Assessment Inventory

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Objective: COVID-19 has significantly impacted society for over 2.5 years, and Long COVID is concerning for its long-term impact on the healthcare system. Further, cognitive and emotional functioning in Long COVID has limited research, but 2 recent studies (Whiteside et al., 2022a, Whiteside et al., 2022b) examined cognitive and emotional functioning in Long COVID patients approximately 6 months post-diagnosis. The studies found limited cognitive deficits, but significant depression and anxiety, which in turn were the best predictors of low average cognitive scores. Further, the mean Personality Assessment Inventory (PAI) profile included highest mean elevations on somatic preoccupation (SOM) and depression (DEP) subscales. To further explore personality functioning in Long COVID, this study compared PAI profiles of Long COVID patients with a

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potentially similar group with post-concussion syndrome (PCS) which has been shown to have a strong psychological component.
Participants and Methods: Participants included 44 consecutive outpatients (Mean age = 47.89, SD = 13.05, 84% Female, 75% Caucasian) referred from a Long COVID clinic with cognitive complaints related to COVID, while the comparison group of PCS patients included 50 consecutive referrals (Mean age = 38.82, SD = 16.24, 52% Female, 90% Caucasian) related to cognitive complaints attributed to PCS. A series of t-tests between the 2 groups was conducted on the PAI validity, clinical, interpersonal, and treatment consideration scales. PAI clinical subscales were also compared. To control for multiple comparisons, $p < .01$ was utilized and effect sizes were compared.
Results: The results demonstrated that both Long COVID (SOM M = 68.66, SD = 12.56; DEP M = 63.39, SD = 12.70) and PCS groups (SOM M = 65.28, SD = 12.06; DEP M = 70.32, SD = 16.15) displayed the highest mean elevations on PAI SOM and DEP scales but no statistically significant differences in mean scale elevations between Long COVID and PCS groups on SOM ($t [92] = 1.33$, $p = .80$) and DEP ($t [92] = -2.11$, $p = .097$). However, results demonstrated statistically significant differences on the paranoia subscale (PAR; $t [92] = -3.27$, $p = .009$), antisocial features subscale (ANT; $t [92] = -2.22$, $p = .01$), stress subscale (STR; $t [90] = -3.51$, $p = .006$) and suicidal ideation subscale (SUI; $t [92] = -2.73$, $p = .000$) of the PAI. Specifically, the mean scores for the PCS group were higher across the paranoia (M = 57.30), antisocial features (M= 52.24), stress (M = 58.44), and suicidal ideation subscales (M = 57.82) of the PAI than the Long COVID group. While these patterns of reporting differed between groups, mean scores for both groups were in the normal range.
Conclusions: Results support the similarities in emotional/personality functioning across Long COVID and PCS patients and the importance of evaluating psychological functioning in these samples as a standard part of neuropsychological evaluations. Further, the results suggest that psychological treatment strategies utilized with PCS patients may be helpful for Long COVID patients, but more research is needed.

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

Keyword 1: concussion/ mild traumatic brain injury
Keyword 2: infectious disease
Keyword 3: personality
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59 Perinatal Risk Factors and Cognitive Outcomes in Children HIV-Exposed, Uninfected

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Objective: Children who are HIV-exposed uninfected (CHEU) are at risk of neurodevelopmental impairments due to perinatal HIV and antiretroviral therapy exposure as well as additional health and psychosocial burdens. There is limited understanding of the impact of perinatal risk factors on long-term outcomes of CHEU. The present study investigated the association between perinatal risk factors and the intellectual and language abilities in CHEU and children who are HIV-unexposed uninfected (CHUU).
Participants and Methods: CHEU and CHUU, 6 to 10 years, of age underwent neurodevelopmental assessments through the Kids Imaging and Neurocognitive Development (KIND) study at the Hospital for Sick Children in

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