

global objective cognition score. Moderated multiple regression was employed to assess the impact of resilience on the relationship between COVID-19 diagnosis and both objective and perceived cognition, controlling for gender, ethnicity, income, age, anxiety, and depression.

Results: Average scores in the COVID-19 group exceeded diagnostic cut-offs for clinical depression ($M=16.67$, $SD=10.77$) and mild anxiety ($M=5.27$, $SD=4.99$), while the control group scored below diagnostic thresholds for depression ($M=11.96$, $SD=9.76$) and mild anxiety ($M=4.48$, $SD=5.07$). Controlling for sociodemographic and mental health characteristics, COVID-19 diagnosis was not associated with objective global cognitive functioning ($b=-.07$, $se=1.71$, $p=.624$) or subjective cognitive functioning ($b=.16$, $se=1.32$, $p=.12$), nor was resilience associated with objective global cognitive functioning ($b=.19$, $se=1.50$, $p=.44$) or subjective cognitive functioning ($b=-.02$, $se=1.09$, $p=.89$).

Conclusions: Findings indicate that COVID-19 patients may be at risk for depression and anxiety. Results of this study fail to support a relationship between COVID-19 and cognitive functioning beyond the impact of sociodemographic and mental health variables. Thus, the role of resilience as a protective factor against COVID-19 related cognitive difficulties could not be fully explored. However, findings should be considered in the context of study limitations, including a small sample size. Future research should employ larger samples to further examine the relationship between COVID-19 infection and cognition, focusing on mental health characteristics and resilience as potential risk and protective factors.

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

Keyword 1: cognitive functioning

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48 A Case of an Extremely Rare CNS *C. Bantiana* Infection with Cognitive Sequela in an Immunocompetent Patient

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Objective: Central nervous system (CNS) infections with the dematiaceous fungus *Cladophialophora bantiana* (*C. bantiana*) are extremely rare, with approximately 120 confirmed cases reported as of 2016. *C. bantiana* is a highly neurotropic and thermotolerant fungus found in soil worldwide. The mode of entry into the CNS remains unknown, but inhalation of fungal spores or subcutaneous trauma have been suggested. Entry of fungal spores can cause cerebral phaeohyphomycosis with the main clinical manifestation of a brain abscess. Symptoms are non-specific and can include headache, fever, hemiparesis, aphasia, visual disturbances, and confusion. *C. bantiana* cerebral phaeohyphomycosis occurs in both immunocompetent and immunocompromised individuals, with a slightly higher prevalence in immunocompetent males for unknown reasons. Diagnosis is often delayed due to its non-specific presentation and prevalence in individuals without pre-existing immunological disease. Prognosis is poor, with mortality rates of approximately 70% despite aggressive treatment. Treatment is not standardized but may include several anti-fungal agents and surgical intervention. Case reports documenting the variability seen with cerebral phaeohyphomycosis by *C. bantiana* can provide valuable insight into this emerging disease. *C. bantiana*'s neurotropic propensity also warrants cognitive investigation of the disease; however, there are currently limited descriptions of cognitive findings in published case reports of *C. bantiana* CNS infections.

Participants and Methods: Here, we describe a case of a 35-year-old immunocompetent, college educated male with a CNS *C. bantiana* infection, presumably following a fall while biking in Costa Rica. First symptoms included left sided facial palsy, headache, and hand weakness, prompting extensive diagnostic workup, with diagnosis of *C. bantiana* infection confirmed 8 months after symptom onset. Initial treatment included anti-fungal agents and steroids, but his course of infection was complicated by infectious vasculitis with posterior circulation infarcts and obstructive hydrocephalus requiring ventriculoperitoneal shunt placement two years following the fungal infection diagnosis. The

most recent brain MRI revealed encephalomalacia in global periventricular areas, two small masses, likely representing small fungal phlegmons, and enhancing lesions in the upper cervical spinal canal.

Results: The patient reported cognitive changes following the infarcts and shunt placement including difficulties with spatial navigation, following directions, and articulating thoughts. Memory concerns and lapses in judgment were also reported. Results from a neuropsychological evaluation revealed high average baseline intellectual abilities with decrements in visuospatial processing, processing speed, executive functioning, and aspects of memory stemming from his executive dysfunction. At the time, his cognitive profile suggested parietal and frontosubcortical systems disruption meeting criteria for mild cognitive impairment. Two years later, the patient reported continuing cognitive difficulties prompting a follow-up neuropsychological evaluation. Results were similar to his first evaluation, revealing deficits in aspects of visuospatial processing, decreased verbal and visual learning, bradyphrenia and processing speed deficits, and difficulties with visual planning and organization. Minimal anxiety and depression, but increased apathy and executive dysfunction were endorsed on self-report measures.

Conclusions: This case report highlights neurological sequela resulting from CNS infection with *C. bantiana*, -with a course complicated by subsequent strokes, hydrocephalus, and cognitive impairment-, and contributes additional insight into the relatively limited existing reports of an extremely rare but emerging disease.

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

Keyword 1: infectious disease

Keyword 2: hydrocephalus

Keyword 3: stroke

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49 Subjective and Objective Psychophysical Olfactory Dysfunction in Men Living with HIV

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Objective: Olfactory dysfunction can influence nutritional intake, the detection of environmental hazards, and quality of life. Prior research has found discordance between subjective and objective measures of olfaction. In people living with HIV (PLWH), olfactory dysfunction is widely reported; however, few studies have examined concordance between subjective olfactory self-ratings and performance on an objective psychophysical measure of olfaction and associated factors in men living with HIV (MLWH).

Participants and Methods: MLWH (n=51, mean age=54 years, 66.7% Black) completed two subjective olfaction ratings (two 5-point Likert scales), the Smell Identification Test (SIT), cognitive measures (HVLt-R, TMT), and self-report questionnaires assessing smell habits, mood, cognitive failures, and quality of life. Participants were categorized into one of four groups: true positives (TP; impaired subjective olfaction and objective olfaction dysfunction), false negatives (FN; intact subjective olfaction and objective olfaction dysfunction), false positives (FP; impaired subjective olfaction and objective normosmia), and true negatives (TN; intact subjective olfaction and normosmia). Established formulas were used to calculate the sensitivity and specificity of subjective olfaction, and t-tests and ANOVA were used to examine potential demographic, clinical, and cognitive factors contributing to discordance between subjective and objective olfaction dysfunction. **Results:** Across both subjective self-report items, 35.3% reported olfactory dysfunction, whereas 60.8% had objective olfaction dysfunction on the SIT (score ≤ 33). Black MLWH had significantly higher rates of subjective (Black 41.2% vs. White 35.3%) and objective (Black 73.5% vs. White 35.3%)