

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%)

olfactory dysfunction ($X^2(1)=9.22, p=.002$). We found discordance between subjective and objective olfaction measures, with 29.4% of the sample having objective olfaction dysfunction and not recognizing it (FN). In comparison, 3.9% with self-rated olfaction impairment had normal objective olfaction scores (FP). Additionally, there was concordance in subjective self-reports compared with objective olfaction, with 35.3% correctly identifying normal olfaction (TN) and 31.4% correctly identifying olfactory dysfunction (TP). Those unaware of olfaction dysfunction (FN) reported using less scented products in daily life on the Smell Habits Questionnaire. Although the FN group had faster TMT scores, these findings were no longer significant after the removal of three outliers in the TP group (e.g., time to complete greater than 350 seconds).

Conclusions: Our findings cohere with work in healthy older adults, traumatic brain injury, and Parkinson's disease, documenting that subjective olfaction may inadequately capture the full range of a person's olfactory status. We extend these findings to a sample of MLWH, in which discordance rates ranged from 35-61% for subjective and objective olfactory dysfunction. Unawareness of olfactory dysfunction in MLWH was associated with less daily smell habits and paradoxically faster TMT performance. A higher number of smell habits in the TP group indicate that more frequent odor exposure may increase sensitivity to olfactory declines. Future studies with larger samples will be helpful in understanding the full nature of these relationships. Lastly, given that one-third of the sample had discordance between subjective and objective olfaction, objective olfaction measures may be useful to consider in the neuropsychological assessment and standard clinical care for PLWH.

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

Keyword 1: HIV/AIDS

Keyword 2: olfaction

Keyword 3: cognitive functioning

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50 Pain severity as a predictor of verbal fluency functioning after COVID-19 illness

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Objective: Published results focusing on language assessment in acutely recovered COVID-19 patients have shown communication problems in this group, including significant cognitive-linguistic disruptions in verbal fluency (Cummings, 2022). Extant research also indicates that poorer health-related outcomes, such as reduced physical functioning and quality of life, co-occur with cognitive difficulties post-COVID-19 infection (Mendez et al., 2021; Tabacof et al., 2022). Understanding what factors may worsen the impact of COVID-19 on cognition, and aspects of language function specifically, is necessary to determine who is at greatest risk of adverse outcomes following infection. Our goal was to examine the effect of health-related outcomes on language abilities, specifically verbal fluency, post-COVID-19 infection.

Participants and Methods: 37 adults 19 years and older (M age = 38.78, 67.5% female, 92.5% > high school education) were recruited from British Columbia and Ontario, Canada. Participants provided documentation indicating they had had a COVID-19 infection at least 3 months prior to participation.

Participants completed a series of online questionnaires, including the Short Form Health Survey (SF-20), to measure aspects of health-related quality of life. The SF-20 measures dimensions of functioning (physical, social, role) and well-being (mental health, health perception, pain). For each parameter except pain, higher scores indicate better functioning/well-being; for pain higher scores indicate greater pain levels. Participants also completed neuropsychological tests, including measures of verbal fluency, via teleconference. Animals and F-A-S total scores were combined to represent verbal fluency (semantic and phonemic, respectively) performance.

To assess the impact of health outcomes on verbal fluency performance, hierarchical regression analyses were conducted. The six SF-20 subscale scores were entered as predictors and verbal fluency score (sum) as the