

## Improved MOCA Scores While on Clozapine Gains Insight into HIV

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### Abstract

**Introduction.** Many patients suffer from comorbid HIV and Schizophrenia diagnoses. Patients with schizophrenia and other psychosis are at increased risk of contracting HIV due to numerous psychosocial factors including increased frequency of drug use, increased rates of victimization, and increased propensity for high-risk sexual behaviors. In addition to deficits in functioning related to psychiatric illness, patients with HIV also suffer from virus-related neurocognitive insults. It is quite possible that inflammation associated with an untreated HIV infection could compound the pre-existing neurocognitive decline seen in patients with schizophrenia and other psychosis, creating poor outcomes and treatment-resistant pathology. The benefit of clozapine treatment for schizophrenia patients with comorbid HIV extends beyond just symptomatic control. Long-term and consistent treatment of schizophrenia can be a stepping-stone for the improvement of many psychosocial aspects of life. Patients with well-controlled schizophrenia can lead relatively unaffected lives with improved insight and self-care. Improved insight allows patients to better understand their illness, treatment regimen, and follow-up needs. Improved self-care contributes to increased adherence to treatment regimens and overall health. It is likely that patients who are consistently treated for their schizophrenia will have an increased capacity to understand their HIV diagnosis. With gained understanding, these patients may be more likely to adhere to HAART therapy for HIV and to attend follow-up appointments with infectious disease or primary care. Furthermore, with adherence to HAART therapy, patients can enjoy an improved quality and duration of life by raising CD4 counts and preventing progression to AIDS or succumbing to AIDS-related opportunistic infections.

**Methods.** A patient with schizophrenia and HIV diagnosis was monitored and interviewed with repeated MOCA scoring over a lengthy hospitalization period. During this time, he was titrated to an effective dose of clozapine totaling 400 mg at bedtime. His MOCA scores were compared over this period.

**Results.** In this case, we have observed that starting a patient on clozapine with therapeutic levels for adequate period has improved MOCA scores. Low MOCA scores could be due to untreated HIV, untreated underlying psychosis. Improved MOCA scores have led the patient to gain insight into his HIV diagnosis. For the first time, he felt the need to be on antiretroviral medication and understood the chronic nature of his illness.

**Conclusions.** In conclusion, this case describes a patient with untreated HIV and comorbid schizophrenia who is started on clozapine to gain insight into his medical conditions and become more adherent with HIV HAART. The patient shows improvement in PANSS and MOCA scores, supporting an increased awareness of his illness and an increased ability to remain on treatment.

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## Anosmia as an Enantiopathy for Migraines

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### Abstract

**Introduction.** Elimination of olfactory sensory perception with a reduction in odor-induced migraine has not heretofore been reported.

**Methods.** Case study: A 64-year-old right-handed woman presented with a history of common migraines since childhood. The headaches were bilateral, throbbing, pulsatile, and without aura and were associated with lightheadedness, photophobia, sonophobia, nausea, and vomiting. They would be precipitated by ambient aromas, such as perfumes and bath products, and she became agoraphobic, fearful of going out of her domicile and being exposed to odors. She avoided stores, perfume counters, and public places; scared that it would initiate a disabling headache. Twenty-five years prior to presentation, the patient fell on ice, striking her head and causing a transient loss of consciousness and persistent absence of smell and taste. From that point forwards, while she would have an occasional headache independent of an odor, she no longer experienced odor-induced headaches. Her agoraphobia had resolved. Since the head trauma, her smell remained at 10% to 20%. Her taste remained at 30% of normal.

**Results.** Abnormalities on neurological examination: Motor examination: Drift testing: Right pronator drift with right abductor digiti minimi sign. Cerebellar examination: Bilateral finger-to-nose dysmetria. Rapid alternating movements: decreased in the left upper extremity. Reflexes: Bilateral upper extremity 3+. Absent bilateral ankle jerks. Bilateral palmomental and Hoffmann reflexes present. Chemosensory testing: Olfaction: Brief Smell Identification Test (B-SIT): 7 (hyposmia), Alcohol Sniff Test: 0 (anosmia). Retronasal Olfaction: Retronasal Smell Index: 4 (hyposmia). Gustation: Propylthiouracil Disc Taste Test: 10 (normogeusia). While performing the B-SIT and sniffing the aroma of rose, the patient noted the sudden onset of a headache, even though she could not detect any odor present.

**Discussion.** The temporal relationship between loss of sense of smell and elimination of odor-induced migraines suggests a causal relationship. Conscious recognition of odor may induce a stimulus-response paradigm, whereby migraine occurs. Head trauma-induced anosmia, by elimination of conscious perception of the odor, may thus be the modality whereby her headaches resolved. Alternatively, odors may induce an autonomic response, and conscious recognition of such autonomic response may induce a headache. To tergiversate, that the rose aroma in the B-SIT induced a headache, without any conscious detection of the odor, implies that either unconscious perception is enough to precipitate a headache or that these odors act not as odorants, but rather as an exogenous ambient chemical inducing headaches. Possibly the production of temporary anosmia by use of nose clips may be utilized as a prophylactic device for those with odor-induced migraines. Further investigation into this is warranted.

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