A Case of Acute Psychosis Following Covid-19 Illness

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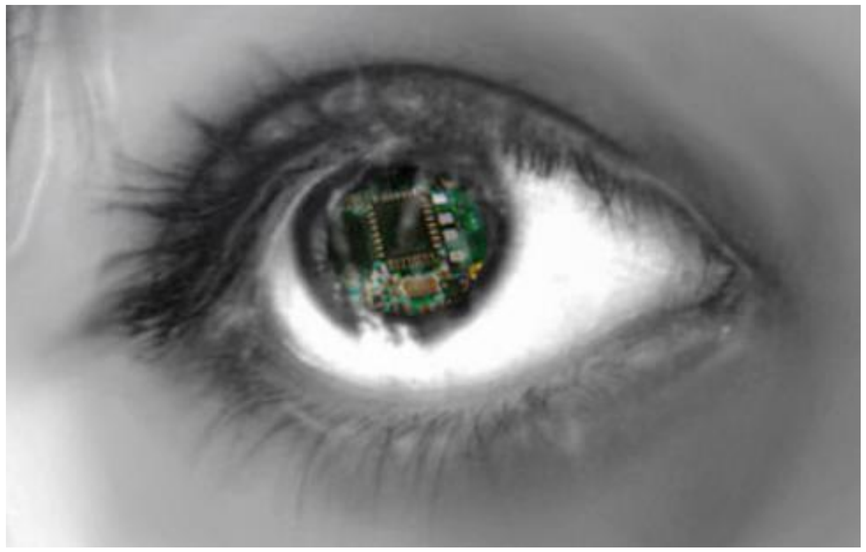
INTRODUCTION

Case reports describe a range of psychiatric complications from SARS-CoV-1, including depression, suicidal ideation, anxiety, hallucinations, and mania. Coronaviruses have been detected in cerebrospinal fluid, are neurotrophic, and can induce a profound inflammatory response. There exist in recent literature several case reports of individuals with no psychiatric history who developed psychotic symptoms during acute infection with the novel SARS-CoV-2 virus. Below we describe a similar case in effort to contribute to growing knowledge of the diverse neuropsychiatric sequelae of this novel pathogen.

CASE PRESENTATION

The patient is a 50-year-old man with no psychiatric history diagnosed with COVID-19 illness and treated at an outside hospital for acute respiratory failure. He was brought to our emergency department two weeks later for psychiatric evaluation after he reported the government was injecting gas into his apartment. Given new-onset psychosis at an abnormal age, he was admitted for medical work-up. Labs were remarkable only for persistently elevated troponin and BNP and mild hyponatremia. TSH, HIV, CK, ESR, CRP, RPR, CSF, urine drug screen and ceruloplasmin were unremarkable. MRI brain showed diffuse white matter disease consistent with chronic hypertension. On psychiatric evaluation, patient presented as organized and oriented with normal attention, memory, and concentration. He endorsed delusions that he was a prince, had robot eyes, was on a mission from God, and believed a 5G tower near his apartment was burning his skin. Collateral from his work supervisor and close friend revealed sudden onset of these symptoms and he was otherwise described as intelligent and hard-working with no known psychiatric or substance abuse history.



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MANAGEMENT AND OUTCOME

Psychosis persisted several days into medical work-up, so the patient was started on risperidone. There was notable improvement in his psychotic symptoms, but hyper-religiosity and delusions persisted to the point that he remained gravely disabled. He transferred voluntarily to inpatient psychiatry for ongoing treatment. He was discharged on low dose risperidone with continuation of delusions regarding 5G, but they were less intrusive and bothersome. At phone follow-up one month after discharge, the patient reported improvement in psychiatric symptoms with remarkable insight.

DISCUSSION

The case discussed is similar to the few published case studies describing the acute onset of psychosis in context of recent SARS-CoV-2 infection. The patient has no prior history of psychosis and presented with profound anxiety due to clearly delusional thought content with no evidence of delirium or encephalitis. There is evidence that human coronaviruses may act as opportunistic, neuroinvasive pathogens in the CNS and the patient continued to test positive on admission, which may or may not be related. Interestingly, he did not have the elevated inflammatory markers seen in previous cases. Future research should continue to evaluate both the direct and indirect effects of the novel coronavirus on the CNS and how they may lead to the acute onset of psychosis.