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Case Report

A Case Report of Non-Reactive Psychosis in a COVID-19 Patient

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I N F O

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A B S T R A C T

Background: COVID-19 causes reactive psychiatric symptoms like anxiety, depression, insomnia etc besides significant inflammatory response. A number of COVID-19 patients are found to present with complex neuropsychiatric syndromes, including the first onset of psychosis, that seem to be directly related to brain damage in the context of COVID-19. Most cases of psychotic disorder in COVID-19 patients are being found in individuals with no personal or family history of mental illness.

Case Description: A 33-year-old man presented with acute restlessness, agitation, wandering, vandalizing things, suspiciousness, hallucinatory behaviour, decreased sleep for 3 days duration. There was no past history or family history of any psychiatric illness. There was a history of mild grade fever 7 days before the onset of the psychotic symptoms. The patient was uncooperative, irritable, and had hallucinatory behaviour. Rapid Antigen Test (RAT) was positive. The patient responded to injectable antipsychotic haloperidol which was later changed to Tab Olanzepine 5 mg. The patient developed no COVID symptoms and no psychotic symptoms were seen further.

Conclusion: There is a possibility of a psychosis break as a COVID-19 clinical presentation, suggesting potential participation of inflammatory and autoimmunologic phenomena triggered as a response to the coronavirus infection.

Keywords: COVID-19, Psychiatric Symptoms, Autoimmunologic Phenomena

Introduction

The COVID-19 outbreak was first reported in Wuhan, China in 2019. The effects of COVID-19 on the mental health of the general population are well documented. Some effects include increased prevalence of anxiety, depression, insomnia and other distress symptoms. These reactive psychiatric symptoms and exacerbation of pre-existing psychiatric conditions have been widely described as secondary effects of social isolation, consequences of the obliged quarantine, fear of the infection, or a complicated grief for the unexpected loss of beloved people.

COVID-19 is a single-strand RNA virus with a distinct crown-like outer envelope. It can cause a range of manifestations, from no symptom, to mild respiratory symptoms, to fatal Severe Acute Respiratory Syndrome (SARS). Initially, it was thought primarily to cause respiratory distress, there is now ample evidence of many other symptoms, including neurological, cognitive and psychological effects, that could

emerge even in patients who didn't develop serious lung, heart or circulatory problems. Such symptoms can be just as debilitating to a person's ability to function and work, and it's often unclear how long they will last or how to treat them. Coronaviruses are neurotropic and can enter the brain through various mechanisms, including the olfactory neural pathway, and they can cause a significant inflammatory response, which can cause both peripheral and Central Nervous System (CNS) manifestations.

A number of COVID-19 patients are presenting with complex neuropsychiatric syndromes, including the first onset of psychosis, that seem to be directly related to brain damage in the context of COVID-19. Most cases of psychotic disorder are being found in individuals with no personal or family history of mental illness.

This is a case of a 33 years old man with no psychiatric or family history who developed an acute psychotic episode due to COVID-19 infection, requiring antipsychotic treatment.

Case Presentation

A 33-year-old man presented to the Psychiatric OPD with a history of sudden onset of restlessness, agitation, wandering, vandalizing things, suspiciousness, hallucinatory behaviour, decreased sleep for 3 days duration. There was no past history or family history of any psychiatric illness. The patient used to drink alcohol occasionally with friends. No other history of substance abuse. There was no history of any chronic physical illness. The patient had a history of mild grade fever about 7 days before the onset of the psychotic symptoms. He had taken over the counter paracetamol tablets and the fever had subsided in a day. As the patient developed abnormal behaviour for 3 days and he was wandering here and there and vandalizing things, he was restrained by his family members and brought to the Psychiatry OPD. On mental status examination, the patient was found to be uncooperative, unkempt, irritable, restless, not responding to questions with the presence of hallucinatory behaviour. On physical examination, vitals were stable, temperature was normal and SpO_2 was normal. The patient was administered Injection Haloperidol 5 mg and Injection Lorazepam 4 mg. Rapid Antigen Test (RAT) was done and it came positive. His electrolytes, renal function tests, liver function tests, blood sugar were normal. He was shifted to a dedicated Covid Hospital where he was followed up by a Consultant Psychiatrist. The patient was kept on Injection Haloperidol and Lorazepam for the first 2 days and as his agitation and restlessness decreased, he was started on Tab Olanzepine 5 mg once a day. On mental status examination, he denied having any delusion or hallucination. He developed no COVID-19 symptoms and did not further show any psychotic symptoms until his discharge 10 days later. He was advised to continue Tab Olanzepine 5mg and review after 2 weeks. When he came for follow up, he was found to have no psychotic symptoms. The dose of Olanzepine was gradually tapered off and stopped over the next 2 weeks.

Discussion

This report describes a male, with an accidental diagnosis of COVID-19 infection and no prior psychiatric history, who developed acute psychosis. Despite extensive workup, no aetiology of his symptoms was identified. The rapid onset with no prior psychiatric symptoms was considered to be a highly unusual presentation. Therefore, COVID- 19-induced psychosis was thought to be the most likely aetiology of her symptoms.

There are other reports of patients presenting with a new onset of psychotic symptoms after contracting COVID-19.[1-11] Smith et al. (2020)[3] claimed credit for presenting "the first case of COVID-19-associated psychosis in a 36-year-old patient with persecutory delusions 4 days after the onset of the respiratory symptoms of COVID with no personal or family history of a severe mood or psychotic disorder who improved with risperidone. While Elfil et al.[6] reported a case of acute psychosis in a 20-year asymptomatic COVID 19 female patient. Speculation is that the encephalitis and altered state of consciousness may arise from inflammatory responses and oedema in the brain. Neuroinflammation has been recognized as a key pathway in the development of psychiatric issues including acute psychosis.[7] It has been hypothesised that human coronaviruses and other respiratory viruses may act as opportunistic pathogens of the CNS as they have been shown to have neuroinvasive qualities, due to either autoimmunity or viral replication. In fact, CNS penetration and neuroinflammation from other coronaviruses have been associated with new-onset psychotic disorders or CNS infection.[8]

Given the number of case reports with a similar presentation, more investigations into the aetiopathology and management of this new disease are required.

Conclusion

The current case report illustrates the possibility of a psychosis break as a COVID-19 clinical presentation. The disease presentation for COVID-19 continues to evolve beyond the established respiratory-related symptoms. It is important for providers to be aware of the wide range of possible manifestations, including neurological symptoms, of the virus when complicated cases present themselves. Though its underlying mechanisms are still unknown, the existing evidence from scientific literature suggests potential participation of inflammatory and autoimmunologic phenomena triggered as a response to the coronavirus infection. Research should continue to elucidate how COVID-19 can present itself across its range of symptoms

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so that the most effective therapies can be established. The current best treatment appears to be largely supportive and symptom-based for neurological complications.

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