

CASE REPORT

Acute psychosis post-COVID-19 pneumonia

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Abstract

COVID-19 disease can be associated with several health-related consequences that are directly or indirectly related to infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Acute psychiatric illnesses in the setting of COVID-19 infection are one of the reported consequences. In this case report, we discuss acute onset of psychosis in a young patient that we believe was related to post-COVID-19 infection. Some findings in the EEG in this patient, we believe, were related to use of antipsychotic medications and that caused challenges in the diagnosis. It is important to be aware of post-COVID-19 psychosis and challenges that may be encountered in the workup.

KEYWORDS

acute psychosis, antipsychotic medication, COVID-19 disease, epilepsy, pneumonia

1 | CASE PRESENTATION

An 18-year-old female with history of mild cognitive disability and mild depression and anxiety was initially admitted for respiratory distress secondary to COVID-19 pneumonia. She was treated with remdesivir and daily IV dexamethasone for 10 days with gradual improvement of respiratory symptoms. At the beginning of 3rd week of admission, the patient suddenly developed severe anxiety, insomnia, and intermittent episodes of agitation, delusions, auditory hallucinations, and suicidal ideation. After 3 days, her psychiatric symptoms and mental status worsened.

On exam, she had poor eye contact and minimal coherent speech and was noted to have repetitive tapping of fingers in bilateral hands, as well as purposeless waving of arms, and agitation. The workup was notable for mildly elevated WBC of $14.4 \times 10^3/\mu\text{l}$, elevated erythrocyte sedimentation rate (ESR) of 51 mm/h, C-reactive protein (CRP) of 14 mg/L, and slightly elevated Alanine aminotransferase (ALT) and aspartate aminotransferase (AST). Cerebrospinal fluid (CSF) was unremarkable (red blood cells <2 cells/ μl , white blood cells <3 cells/ μl , protein 15 mg/dl, glucose 63 mg/dl, and negative pathogen panel, gram stain, and culture), and serum and CSF autoimmune encephalopathy panels were negative (see supplemental data). MRI brain was unremarkable.

After start of her psychiatric symptoms, she was initially treated with hydroxyzine, risperidone, and olanzapine. Five days after start of risperidone and olanzapine, a routine electroencephalogram (EEG) revealed suspicious low-amplitude spikes embedded in intermittent generalized rhythmic slow discharges (Figure 1) which raised some concerns about seizures as etiology of her psychiatric symptoms. However, a subsequent continuous video-EEG monitoring for 2 days did not show any correlation with patient's episodes of agitation, hallucination, or emotional lability, and it was speculated that the rare EEG findings were related to the effect of antipsychotic medications. Risperidone was gradually increased to 1.25 mg twice daily (BID) with improvement in her symptoms. Patient continued to have anxiety and delusions. Two weeks after onset of psychotic symptoms, patient was discharged home on risperidone 0.5 mg BID, and olanzapine was discontinued with plans to follow up with outpatient psychiatry clinic.

2 | DISCUSSION

Development of acute psychosis because of SARS-CoV-2 infection has been reported in several cases since 2020.¹⁻³ However, virus-related psychosis is not unique to SARS-CoV-2 infection; it

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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