

COVID-19 Psychosis in an Adolescent

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INTRODUCTION

A correlation between episodes of COVID-19 infection and subsequent psychosis in the adult population have been documented (Javed et al., 2021). Few reports have been published identifying a relationship between COVID-19 infection and psychosis in adolescents.

CASE REPORT

A 13-year-old female unvaccinated against COVID-19 with no prior psychiatric history presented to the emergency department after testing positive for symptomatic COVID-19 four days ago. At presentation, she exhibited a flat affect, eye contact avoidance, awkward posturing when seated, and refused to open her mouth to eat, drink, or talk.

Throughout admission, the patient exhibited increasingly disorganized behavior and psychosis, paranoia towards her mother, and endorsed persecutory fears and beliefs that her mother was trying to poison her.

TREATMENT

Following therapy with risperidone and lorazepam daily, the patient's psychosis improved. The patient was discharged to an inpatient psychiatry unit and subsequently home with weekly follow-up with a psychiatrist, therapist, and group therapy sessions.

WORK UP

Negative workup included strep test, urinalysis, CT neck, EEG, chest X-ray, brain MRI, thyroid function, HIV, syphilis, urine tox, ammonia, lead, ANA, B12, B9, meningitis, autoimmune encephalitis, paraneoplastic syndrome antibodies, Wilson's disease, and lumbar puncture.

DISCUSSION

The onset of the patient's COVID-19 infection correlated with the presentation of psychotic symptoms. An extensive workup was conducted to evaluate other secondary causes of psychosis. The pathology for how COVID-19 manifests neuropsychiatric symptoms is unknown.

Psychiatric symptoms are thought to manifest due to inflammation induced by cytokine storms and the formation of autoantibodies following active infection of COVID-19 (Hutchinson et al., 2020). However, other cases have been reported in adults with normal inflammatory marker levels and undetectable autoantibody levels (Bartley et al., 2021).

REPORTS OF COVID-19 PSYCHOSIS IN ADOLESCENTS

Case	Age	Sex	Symptoms	During Infection/Post Infection	Improvement Course	Treatment Responsive	Treatment Unresponsive
1	teenager	F	repetitive behaviors, anorexia, and insomnia	during infection	improvement at 1 week	olanzapine	none
2	16	M	swearing, disrobing, hallucinations, delusions, paranoia, agitation	8 days post infection	improvement at 4 weeks	haloperidol initially then olanzapine	none
3	15	F	anxiety, paranoia, delusions, disorganized behavior,	3 months post infection	improvement at 2 weeks	ECT	steroids, IVIG, anakinra, olanzapine, clonidine, lorazepam
4	11	F	hallucinations, tinnitus, vertigo, anxiety, aggression, disorganized behavior	3 weeks post infection	improvement at 5 months	IVIG, steroids, haloperidol, fluoxetine	none
5	16	F	hallucinations, ritualistic behavior, akinetic mutism	during infection	>6 months	Steroids, IVIG, olanzapine, haloperidol	none
6	14	M	irritability, agitation, response to internal stimuli, spontaneous movement, disorganized speech	3-4 weeks post infection	improvement at 11 days	olanzapine	anakinra, haloperidol, steroids
7	17	M	paranoia, delusions, agitations, insomnia, lability, flat affect, depressed mood	3 weeks post infection	improvement at 4 weeks	aripiprazole	none
8	16	M	delusions, irritability, mood lability, insomnia, hallucinations	2 weeks post infection	improvement at discharge	olanzapine	none
9	15	F	delusions, hallucinations, seizures, paranoia	2.5 weeks post infection	improvement at 2 weeks	olanzapine	none
New Case	13	F	refusal to speak or eat, flat affect, agitation, delusions, paranoia	during infection	improvement at 2 weeks	risperidone, olanzapine	none

1: (Bartley et al., 2022) 2: (Bashir et al., 2022) 3: (Chowdhury et al., 2022) 4: (Desai et al., 2022) 5: (Gaughan et al., 2021) 6: (Hutchinson et al., 2020) 7: (Javed et al., 2021) 8: (Meeder et al., 2022) 9: (Thomas et al., 2022)