# Catatonia is a neuropsychiatric complication of COVID-19 which typically responds to lorazepam treatment.

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# Background/Significance

- At least seven cases of catatonia associated with coronavirus disease 2019 (COVID-19) have been reported.
- We present three additional cases of COVID-19-associated catatonia.

### Discussion

- These cases add to our growing knowledge of COVID-19-associated catatonia.
- Notably, we believe that we have presented the second case of delayed-onset catatonia following COVID-19 infection, highlighting yet another potential long-term sequela of COVID-19.
- A possible mechanism is COVID-induced hyperinflammation impairing GABAergic transmission in the basal ganglia, which correlates with the beneficial effects seen with lorazepam (a GABA agonist).
- Coupled with previous data showing catatonia is underrecognized in both psychiatric and general medical settings, and that catatonic features were prominent in previous post-pandemic neuropsychiatric syndromes such as encephalitis lethargica, there is cause for concern that the burden of COVID-19 catatonia may be significant and underestimated.

#### References

- Cooper JJ, Ross DA: COVID-19 catatonia—would we even know? Biol Psychiatry 2020; 88(5): e19–21.
- Gouse BM, Spears WE, Nieves Archibald A, Montalvo C: Catatonia in a hospitalized patient with COVID-19 and proposed immune-mediated mechanism. Brain Behav Immun 2020; 89: 529–30.
- Zain SM, Muthukanagaraj P, Rahman N: Excited Catatonia A Delayed Neuropsychiatric Complication of COVID-19 Infection. Cureus 2021; 13(3).

## COVID-19 Catatonia: A Review and Update After One Year

- 26-year-old woman with no prior psychiatric history who presented with bizarre behavior.
- Examination showed mutism, grimacing, stereotypies, and negativism.
- COVID-19 PCR was positive, though she had no other signs of infection.
- MRI brain and CSF were negative.
- She responded to lorazepam and lysis of catatonia revealed psychotic mania with Cotard delusion, grandiosity, auditory hallucinations, and persecutory delusions that responded rapidly to risperidone. She was discharged at her baseline.

1

- Six weeks after contracting COVID-19, a 27-year-old woman with a history of intellectual disability and anxiety presented with poor oral intake, staring, intermittent agitation, and mutism.
- Her symptoms improved with lorazepam challenge. Psychotic mania was revealed with agitation, grandiosity, persecutory delusions, and auditory hallucinations.
- Brain MRI showed longstanding and unchanged global atrophy and ventriculomegaly.
- She improved on lorazepam, lithium, and olanzapine.

3

- 69-year-old woman with a history of epilepsy admitted with mild/moderate COVID-19 pneumonia.
- Examination showed mutism, immobility, and rigidity.
- EEG revealed generalized slowing without seizure activity.
- MRI brain was unremarkable.
- After several days of scheduled lorazepam, she returned to baseline.