CNS Spectrums

www.cambridge.org/cns

COVID delirium—psychopharmacological tips

Ahmed Naguy[1]*, Saxby Pridmore[2] and Bibi Alamiri[1]

[1]Al-Manara CAP Centre, Kuwait Centre for Mental Health (KCMH), Jamal Abdul-Nassir St, Shuwaikh, State of Kuwait, and [2]Department of Psychiatry, University of Tasmania, Hobart, Australia

Letter to the Editor

Cite this article: Naguy A, Pridmore S, and Alamiri B (2022). COVID delirium—psychopharmacological tips. *CNS Spectrums* **27**(5), 543–544.
https://doi.org/10.1017/S1092852921000286

Received: 19 February 2021
Accepted: 03 June 2021

Key words:
COVID; delirium; psychopharmacotherapy

Author for correspondence:
*Ahmed Naguy,
Email: ahmednagy@hotmail.co.uk

To the editor:

Deliria in the setting of COVID infection are quite ubiquitous and mutifactorial in causation. Pneumonia, fever, dyselectrolitaemia, dehydration, pain, polypharmacy, and so on are all contributory. COVID-associated "cytokine storm" might account to the higher rates of deliria encountered particularly in these cases.[1] Interestingly, data accrue speaking to the idea that COVID neurotropism might be responsible to a primary type of deliria—*neurocovid*.[2]

COVID deliria have been specifically characterized by agitation (hyperactive delirium), requiring more sedation and poor lorazepam-responsive catatonic presentations. Multifocal myoclonus and frontal release signs are commonly seen too.[3]

Management follows general lines of addressing underlying infection (eg, antiviral remdesivir; but beware it is a substrate of CYP 3A4) and metabolic derangement, attention to hydration status, nutrition, ventilation, skin care, environmental accommodations, and reorientation.

A meta-analysis of four randomized controlled trial RCTs has demonstrated that melatonin supplementation at 9 pm had a significant preventive effect in decreasing the incidence of deliria in elderly patients in medical wards by 75%. This has also been demonstrated to melatonin analogue, ramelteon in another RCT.[4] Given antioxidant, neuroprotective, and immunosuppressive actions (beneficial for the cytokine storm), melatonin 1 to 3 mg has been generally recommended for patients with COVID deliria.

Antipsychotics remain the mainstay of addressing hyperactive deliria with hallucinatory experiences, and delusional beliefs especially in the presence of safety concerns—it should be borne in mind, however, that the use of high-potency D2 blockers (typically haloperidol) in COVID-delirium with catatonic presentations or severe dehydration might significantly up the risk of neuroleptic malignant syndrome. Haloperidol, especially intravenous, is less neurotoxic and some evidence suggests a beneficial role beyond delirium, by virtue of actions on sigma receptors. If any, low-potency agents (eg, chlorpromazine different formulations) can be used instead. However, anticholinergic and adrenolytic actions of these latter agents should be carefully monitored. Close observation of QT interval corrected for heart rate QTc interval is warranted especially azithromycin and hydroxychloroquine, still being integral part of many COVID treatment protocols, can notoriously increase the risk of QTc prolongation and torsadogenecity. Contrariwise, subdued patients with hypoactive delirium might benefit from aripiprazole.

Because of these aforementioned risks, α2 agonists, like dexmedetomidine, have been strongly suggested in ICU setting to sedate patients with COVID deliria in lieu of antipsychotics. Risk of hypotension and bradycardia with these agents should be taken into consideration given the demonstrated systematic impact of COVID infection on cardiac conductivity (eg, high-grades atrio-ventricular AV block).

Benzodiazepines should be generally avoided as it can worsen and prolong deliria and meanwhile, may risk respiratory depression in COVID pneumonia.

Since multifocal myoclonus and seizures are fairly commonplace in COVID deliria, use of broad-spectrum antiepileptic drugs like valproate can be justified to target agitation as well. Valproate confers neuroprotection as a bonanza.[5]

It has been shown in COVID delirium-catatonia composite presentation is at times difficult to brush out, and given the differential response to antipsychotics-benzodiazepines, some authors have suggested deploying amantadine. Amantadine has dopaminomimetic, weak anticholinergic and antiglutamate actions that can be helpful in these complex clinical scenarios. Amantadine has antiviral actions that can be of potential use in COVID infection.

Vitamins C and D supplementation is highly advised in many COVID protocols currently.

Disclosure. The authors have no competing interests or financial affiliations.

References

1. Ibrahim W. Neurological manifestations in corona virus 2019 (COVID-19) patients: a systematic review of literature. *CNS Spectr.* 2020;1–12. doi:10.1017/S1092852920001935

2. De Berardis D. How concerned should we be about neurotropism of SARS-Cov-2? A brief clinical consideration of the possible psychiatric implications. *CNS Spectr*. 2020;1–2. doi:10.1017/S 1092852920002175
3. Ibrahim W. Unmet needs of mental illness issues in COVID-19: the importance of analyzing neuropsychiatric manifestations. *CNS Spectr*. 2020;1–2. doi:10.1017/S1092852920002205
4. Naguy A, Alamiri B, Shoukry T. Melatonin use in psychiatry—Quo Vadis? *Am J Ther*. 2020;**27**(5):e459–e499.
5. Naguy A. Valproate for schizophrenia: ambrosia? *CNS Spectr*. 2020;1–2. doi: 10.1017/S1092852920001285

https://doi.org/10.1017/S1092852921000286 Published online by Cambridge University Press