

Encephalopathy in patient with concomitant Catatonic Depression with Psychotic Features

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Introduction

Over the course of the COVID-19 pandemic it has become apparent that there are numerous neuropsychiatric effects of the COVID-19 virus with incidence rates between 33-62% following COVID-19 infection.¹⁻² Neuropsychiatric sequelae include depression, anxiety, PTSD, cognitive deficits, fatigue, sleep disturbance, psychosis, encephalopathy and catatonia.³

Until recently encephalopathy (delirium) and catatonia were considered distinct clinical entities that could not overlap.⁴⁻⁵ Despite awareness of delirium and catatonia potentially existing on a spectrum in critically ill patients,⁶ literature remains limited regarding mixed encephalopathy and catatonia following acute COVID-19 infection.

This poster presents a case of encephalopathy with concurrent features of catatonia and psychotic depression following COVID-19 infection and identifies areas for future investigation.

Case Description

History

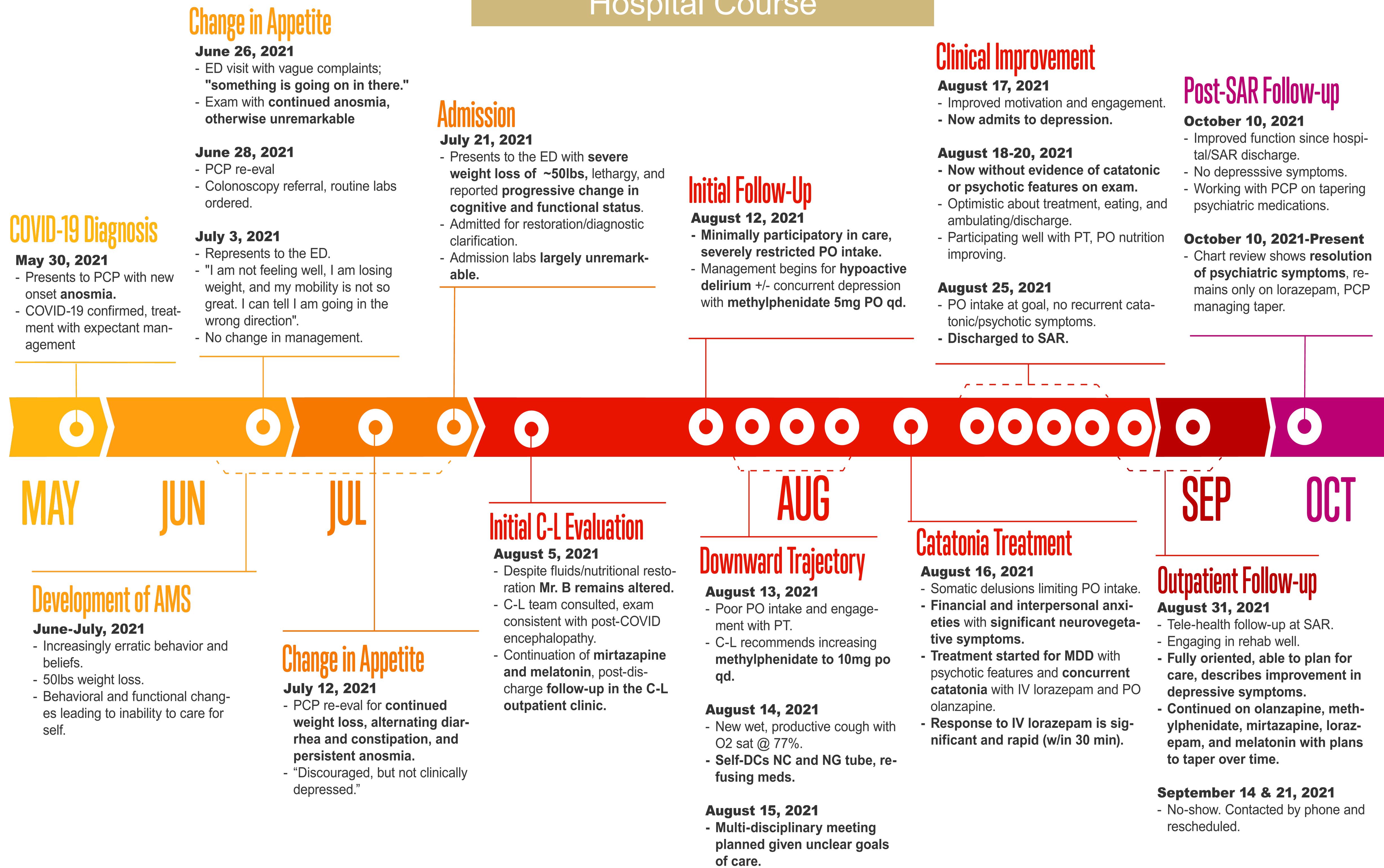
Mr. B is a 49-year-old male with a history of pulmonary and neurologic sarcoidosis who demonstrated unintentional weight loss, progressive weakness, and mental status changes evolving over several months following a COVID-19 infection.

Pertinent Objective Data on Admission

CT Brain with and without contrast: "No acute intracranial abnormality. No intracranial hemorrhage, mass effect, or evolving large territorial infarct."

148	110	28	80	12.3
3.5	24	0.82		3.5

Hospital Course



Outcome

In a patient with initial evidence of encephalopathy limited progress was made until consideration was given to the concurrent diagnoses of encephalopathy AND major depressive disorder with psychotic and catatonic features.

- Despite a regimen of methylphenidate, mirtazapine, and melatonin, sustained recovery was only achieved with the addition of lorazepam and olanzapine.
- Following treatment for catatonia the patient was rapidly able to clear and transfer to a subacute rehab facility for physical rehabilitation.
- Outpatient follow-up demonstrated sustained neurocognitive improvement as well as improvement in mood.
- Mr. B was able to slowly taper from his psychotropic medications via follow-up with his PCP and remains only on lorazepam for anxiety demonstrating the efficacy of the above regimen.

Discussion

Catatonia and delirium were classically considered to be mutually exclusive processes, however, increasingly literature supports that they may in fact exist on a spectrum and/or present concurrently.

Mr. B's course including deconditioning, delay in complete restoration of nutrition, and development of worsening affective and psychotic features demonstrates the risk of a delay or failure to identify catatonic features in patients with evidence of encephalopathy. Nutritional restoration and prescription stimulants proved ineffective at increasing engagement and focus, rather several adverse outcomes occurred as a result of his ongoing altered mentation.

Progress only occurred once the patient was assessed from an affective perspective with the identification of depressive, psychotic, and catatonic features and subsequent treatment with olanzapine and IV lorazepam.

Discussion (cont)

The rapidity of his response supports the accuracy of the diagnosis while also highlighting the potential complications of this constellation of symptoms.

Benzodiazepines are deliriogenic and may exacerbate altered mental status exposing patients and staff to risk. However, as in this case, delay in treatment may prolong hospitalization, worsen neurologic sequelae, and precipitate medical complications or adverse events.

Finally, consistent with previous literature, COVID-19 can precipitate psychiatric illness (e.g. depression) in previously mentally healthy individuals. This case reinforces the importance of assessing for new onset mental health symptoms, in patients with a history of COVID-19 infection.

Conclusions

- Patients with COVID-19 can manifest with several neuropsychiatric complications including depression, encephalopathy, and catatonia.
- In patients with altered mental status concerning for delirium it is important to consider the possibility of concurrent catatonia as delirium alone may be insufficient to explain symptoms and delay of appropriate treatment may have significant morbidity and mortality.
- Further research should be considered to evaluate the potential interplay between systemic illnesses such as COVID-19 and the generation of this combination of clinical features.

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