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### Subclinical Status Epilepticus in the Setting of an Acute COVID-19 Infection

Thomas Rieth

*Children's Mercy Hospital*

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# Subclinical Status Epilepticus in the Setting of an Acute COVID-19 Infection

Thomas Rieth MD, Julio Quezada MD

Children's Mercy Kansas City

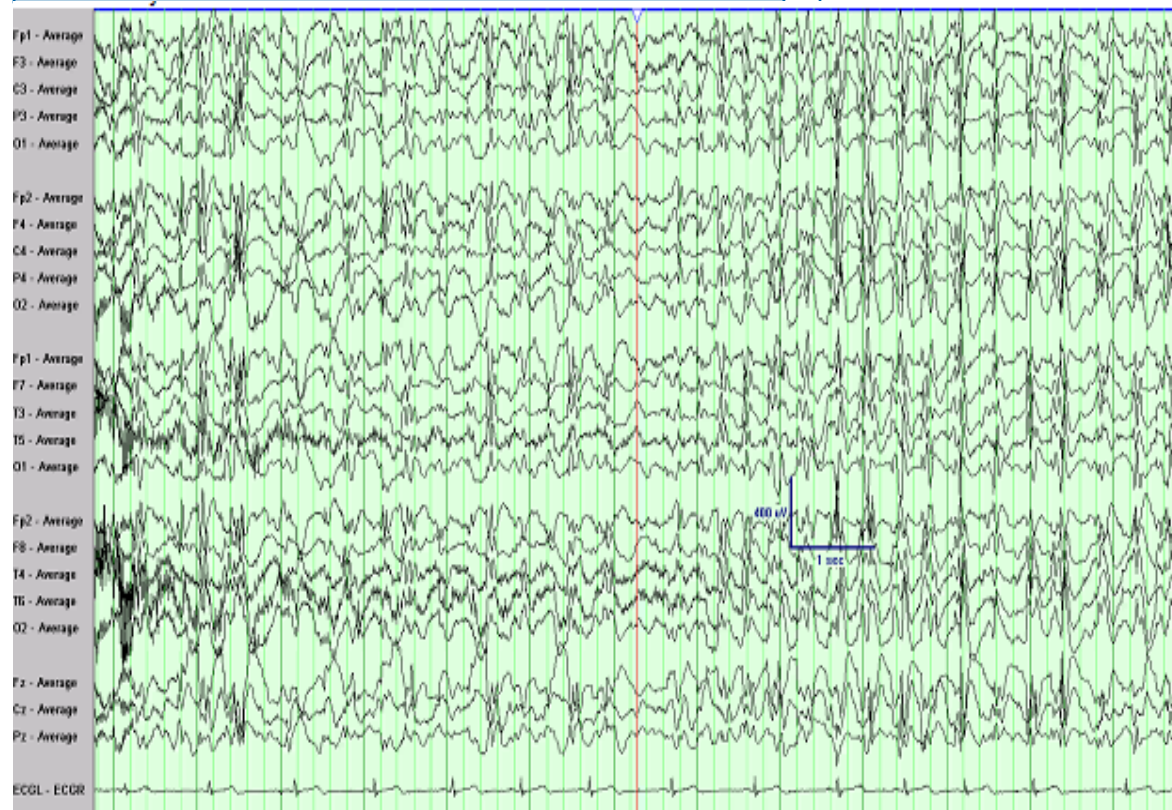
## Background

While COVID-19 commonly presents as an upper respiratory infection, acute COVID infections have the potential for multisystem involvement. Neurological symptoms, which have mainly been reported in adults, are rare in children. Better understanding of the neurological manifestations of COVID-19 in children can lead to earlier detection of COVID-19 and help with medical decision making and treatment.

## Case Presentation

A 10 year old previously healthy female presented with a 1 day history of altered mental status. She was less talkative in the morning and had unusual behavior at school: sitting in the wrong seat in the classroom, and needing help putting on her mask. Her parents reported seeing "eyelid fluttering" as they were taking her to the emergency department.

On exam, she was not oriented to place or time, and she had lapses in memory: inability to recall what she had for breakfast, inability to recall what she did over the weekend.



Initial workup was normal (CBC, BMP, LFT, CXR, TSH, Ammonia, UDS, and CT head w/o contrast except for a positive COVID-19 antigen test. An EEG was then performed, which revealed patient was in subclinical generalized status epilepticus. She was loaded with 0.1 mg of Ativan and 40 mg/kg of Keppra which resolved the status epilepticus. She was eventually discharged home on Keppra and had not seizure recurrence. A repeat EEG 6 months after the initial EEG was reported as normal for her age.

## Discussion

Neurologic Complications described in COVID-19:

- Headaches
- Anosmia/Ageusia
- Encephalopathy, Encephalitis, Meningitis
- Seizures
- Cerebrovascular disease including ischemic and hemorrhagic strokes, venous thrombosis, and cerebral arteriopathy
- ADEM
- Acute Fulminant Cerebral Edema
- Acute Myelitis
- Guillain Barre Syndrome

While most neurologic complications are associated with severe cases of COVID-19, they can be the only presenting symptom in some patients.

Pathophysiology of neurologic complications is not well understood

Outcomes vary based on presentation and comorbidities, but the majority of acute neurologic complications appear to temporary.

More research is needed on long-term neurodevelopmental outcomes.

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