Neurocovid in the Peripartum Period

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INTRODUCTION

- COVID-19 is conventionally represented as a febrile illness with respiratory involvement; however, unusual sequela have also been reported.[1]
- Up to 40%–88% of patients with severe COVID-19 are reported to present with neurological symptoms, such as neurodegeneration, neuroinflammation and demyelination signs.[2]

The physiologic impacts of pregnancy may exacerbate the severity of these neurologic symptoms, presenting diagnostic and therapeutic challenges.

CASE HISTORY

A 16yo G1P0 at 30w presented to the ICU with respiratory failure secondary to COVID-19 and sepsis from superimposed pneumonia. She was treated with remdesivir, steroids, antibiotics, and subsequently recovered to home discharge.

Seizures
- Readmitted at 33.5w with tonic-clonic seizures
  MRI brain reveal ischemia, consistent with seizures

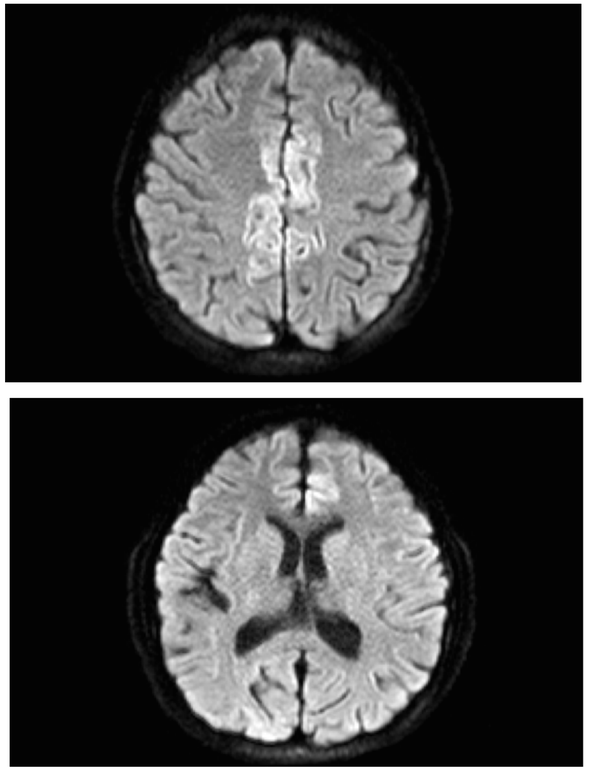
Paralysis
- Rapid, bilateral ascending paralysis
  → respiratory failure requiring intubation

Cesarean
- Fetal distress prompted CD on hospital day 6
  pt still intubated and sedated, so performed under general

Recovery
- Course c/b frontal lobe infarct, weakness, delirium, and abnormal behavior requiring antipsychotic therapy
- HD 24 – discharged to inpatient rehabilitation facility

IMAGES

Figure 1. MRI of the patient's brain showing symmetric cortical diffusion restriction of the frontal lobes



REFERENCES

LEARNING POINTS

Manifestation of neurocovid

- Inflammation of the CNS can produce mild symptoms such as anosmia to severe such as seizures (occurs 1-2 days after the symptomatic phase)
- Hypercoagulability can result in stroke, which usually occurs 2 weeks after the onset of the symptoms[3]

COVID in parturients vs general population

- Pregnant women are more susceptible to thromboembolic complications due to baseline hypercoagulability and the procoagulant state associated with COVID-19

Treatment options of COVID-19 in pregnancy

- Treatment options for patients with clear inflammatory and vascular changes include[4]:
  - steroids
  - aspirin
  - IVIG
  - Remdesivir

DDX of seizures in pregnancy

- When considering a differential diagnosis for seizures in pregnancy, it should remain broad. It's not always eclampsia!
  - *Consider: epilepsy, PRES, stroke, infection, electrolytes, and drugs*