

Introduction

- Transverse Myelitis (TM) is a disorder characterized by spinal cord inflammation, typically due to infectious or immune system disorders.
- This case report describes a child diagnosed with TM associated with SARS-CoV-2 infection

Case Description

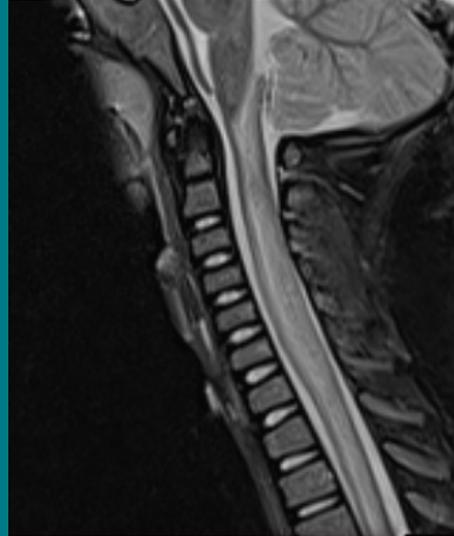
- 3-year-old female with no significant past medical history presented to the emergency department with acute-onset progressively worsening weakness in all four extremities, respiratory distress, and decreased level of consciousness
- She was intubated and admitted to the PICU. Initially she was found to be positive for the SARS-CoV-2 virus.
- Diagnostic workup included CSF with increased protein and WBCs, along with MRI demonstrating spinal cord edema and non-compressive myelopathy, consistent with TM.
- Following treatment course, there was no significant improvement in her extremity weakness, and she remained ventilator-dependent.

Treatment Course

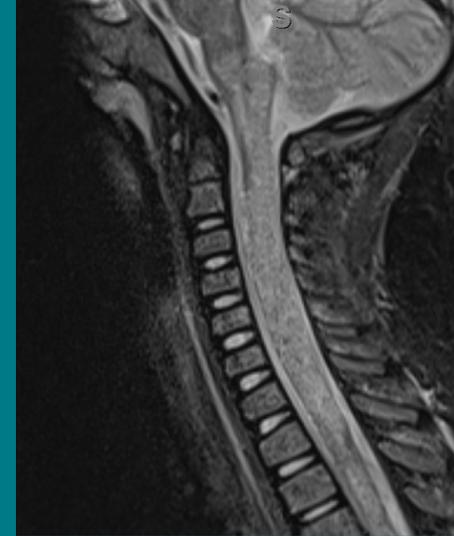
- High-dose steroids
- IVIG
- Plasmapheresis: 10 sessions
- Rituximab
- Intensive rehab program with PT, OT, and Speech Therapy

Acute Transverse Myelitis in a Pediatric Patient with Associated COVID-19: A Case Report

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Day of Admission



Day 5 of Admission

- Short Tau Imaging Recovery (STIR) MRI C-spine shown above at day 1 and day 5 of patient's hospitalization
- These images demonstrate worsening edema with swelling of the cervical spinal cord itself, extending from the medulla to the mid-thoracic spinal cord.
- There is also evidence of small petechial-type spinal cord hemorrhage without frank hematoma.



Poster QR Code

Discussion

- Severe respiratory failure represents the most fatal aspect of COVID-19. However, other consequences of the disease including neurological deficits may result in long-term disability.
- There are only a few known cases of TM resulting from the SARS-CoV-2 virus, most of which are in adults. To the best of our knowledge, this represents only the second reported case of SARS-CoV-2-associated transverse myelitis in a child.
- In both cases, symptoms of transverse myelitis developed in the absence of respiratory symptoms and were associated with a prolonged recovery despite aggressive immunomodulatory therapy.

Conclusions

- TM is a rare but disabling condition that may result from SARS-CoV-2 infection.
- In the context of a global pandemic, COVID-19 should be considered within the differential diagnosis of patients with acute neurological decline, even in the absence of typical respiratory symptoms.

References

- Valiuddin, Hisham et al. "Acute transverse myelitis associated with SARS-CoV-2: A Case-Report." *Brain, behavior, & immunity - health* vol. 5 (2020): 100091. doi:10.1016/j.bbih.2020.100091
- Lim, Peter A.C.. "Transverse Myelitis." *Essentials of Physical Medicine and Rehabilitation* (2020): 952–959. doi:10.1016/B978-0-323-54947-9.00162-0