COVID-19 Multisystem Inflammatory Syndrome Causes Rare Cerebral Vascular Accident in 3-Year-Old Child With Factor V Leiden

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Case Diagnosis

- 3 y/o with COVID-19 multisystem inflammatory syndrome in children (MIS-C) and subsequent cerebral vascular accident and splenic infarction.

Case Description

- After 4 days of acute systemic illness, patient was diagnosed with MIS-C. An acute right hemiparesis led to MRI /MRA which found left middle cerebral artery (MCA) M2 occlusion of superior temporal branch with MCA infarction (Images 1-2).
- He underwent successful mechanical thrombectomy and was treated with IVIG, methylprednisolone, aspirin, and low-molecular weight heparin.
- Coagulation studies later identified Factor V Leiden mutation.

Assessment/Results

- Three weeks post discharge, he demonstrated normal gait with only very mild right ankle plantar flexor spasticity on examination. This has largely resolved. Follow up imaging 2 months later (Image 3-4).

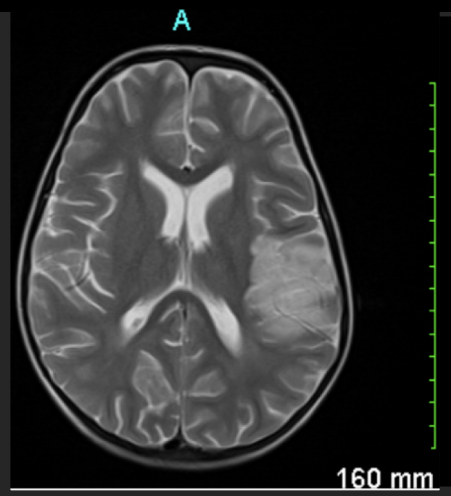

Image 1. T2 –weighted image, 12/21/2021.

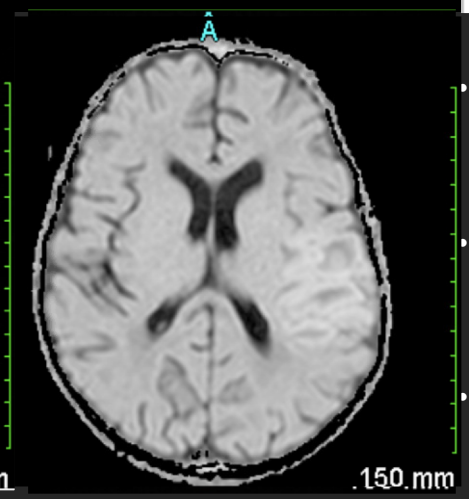

Image 2. Diffusion weighted imaging, 12/21/2021.

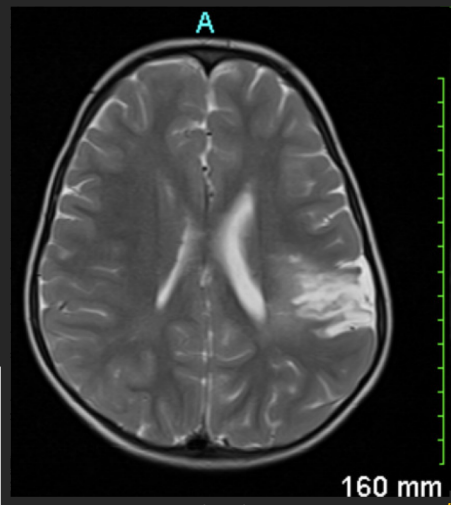

Image 3. T2 –weighted image, 2/10/2021.

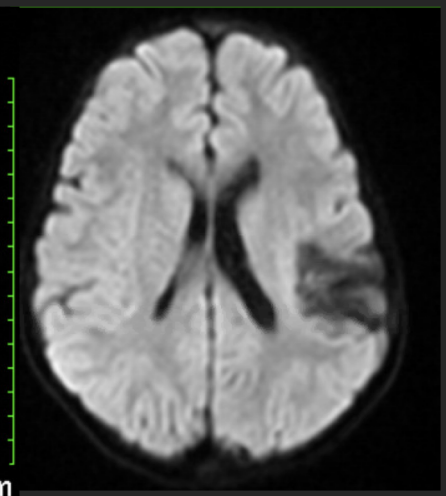

Image 4. Diffusion weighted imaging, 12/21/2021.

Discussion

- MIS-C is an emerging complication of COVID-19 in children and may require inpatient rehabilitation.
- The patient's stroke and splenic infarction during his MIS-C was likely exacerbated by his underlying Factor V Leiden mutation.
- Although COVID cases are less prevalent in pediatric literature, COVID may precipitate underlying conditions, namely coagulopathies.

Conclusion

- An interdisciplinary team is required, especially with pediatric patients, for optimal treatment of MIS-C.
- Early rehabilitation is critical with interdisciplinary and multispecialty efforts to maximize functional recovery.
- This case suggests a coagulopathic panel may be useful in determining etiology and preventing further thromboembolic sequelae.

Sources available upon request.

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