A Case Report of Acute Flaccid Paralysis Caused by Enterovirus A71 Infection

Audrey Shawley, BA[1], Taylor Katt, MD[2]

1. The University of Queensland-Ochsner Clinical School
2. Ochsner Health System Department of Pediatrics

Introduction

Acute flaccid myelitis (AFM) is a new term introduced in 2014 following an upsurge of pediatric cases of profound weakness following enterovirus D68 infection [1,2]. AFM is a challenging diagnosis because it can mimic other causes of acute weakness. Here we report a case of AFM following enterovirus A71 infection.

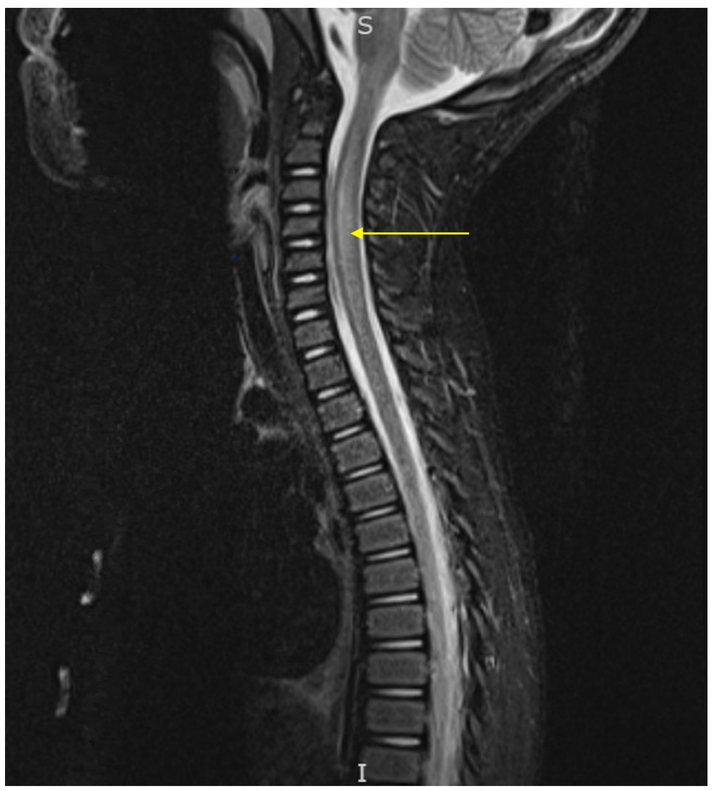

Figure 1: Sagittal T2 Stir MRI Cervical spine showing a diffuse non-enhancing central spinal cord lesion extending from the inferior level of C2 through the level of T1.

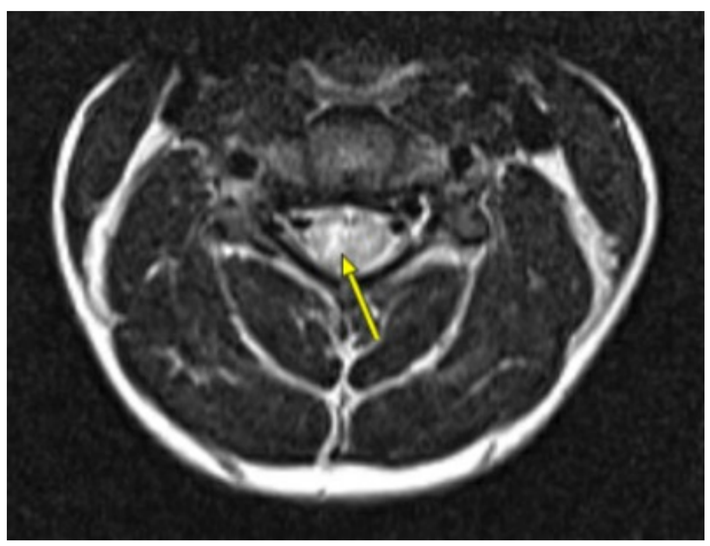

Figure 2: T2 Stir MRI of cervical spine axial showing lateralization at the level of C4-C6.

Case Presentation

A 5-year-old male presented to the emergency department with right arm weakness. The week prior to admission, he experienced symptoms consistent with acute gastroenteritis. The day prior, he experienced hallucinations, right upper and lower extremity weakness, and right facial droop. On admission, vital signs were stable, and showed no signs of respiratory distress. The initial differential included inflammatory, metabolic, infectious, malignant, and functional etiologies [3, 4, 5]. Lower extremity weakness had resolved, but was unable to abduct, flex or supinate his right upper extremity. Bicep and tricep reflexes were 1+ on the right and 2+ on the left. Remainder of the neurological exam was normal. Initial labs including CBC, CMP, and inflammatory markers were normal. Lumbar puncture showed elevated WBC (53), but was otherwise normal. MRI w/wo contrast showed subtle nonenhancing central intramedullary T2 hyperintensity in the cervical spine from the cervicomedullary junction to C6-C7. Further work-up included meningitis/encephalitis panel, Multiple Sclerosis panel, Enterovirus, Bartonella Antibody, NMOSD, AQP4, and MOG. Prior to results returning, he was empirically treated with IVIG 2 gram/kg over two days and five days of IV methylprednisolone 30 mg/kg. After treatment, he showed moderate improvement in right upper extremity strength. Workup later returned with a positive stool sample for Enterovirus A-71. At one month follow-up, he had shown significant improvement in right upper extremity strength with physical therapy.

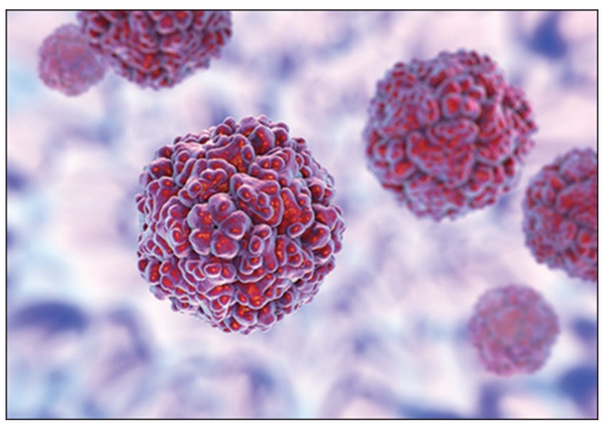

Figure 3: Enterovirus A71 [7]

Discussion

Delayed recognition of AFM is concerning due to the risk of respiratory failure. In a recent retrospective multicenter study, in 72% of the cases of confirmed pediatric AFM, AFM was not considered in the initial differential diagnosis and/or the patient was not referred for acute care at the initial clinical encounter [6]. With over 50% of patients requiring an ICU admission, it is critical to promptly recognize and initiate treatment [3]. Further, most documented cases of AFM are in association with enterovirus D68. Here we report a presentation following infection with enterovirus A71, which had previously been reported to exhibit different clinical presentations, and be geographically restricted mainly to the Asia-Pacific region [2].

References

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