

Cognitive Neuroscience 2020: Clarifying the diagnosis of Acute flaccid myelitis- Anna Jarrett- University of Arkansas, USA

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Introduction:

Statement of the Problem: Acute Flaccid Myelitis (AFM) is a serious condition that primarily affects children. AFM is a type of Acute flaccid paralysis, a global terms for AFM and non-AFM etiologies. AFM is diagnosed by gray matter abnormalities in the spinal cord on MRI, or pleocytosis in the cerebral spinal fluid. AFM attacks spinal cord gray matter resulting in lower motor neuron injury and flaccid weakness in the extremities. Although the specific cause of most cases is unknown, viruses, toxins and genetic disorders have been implicated. Stopping the spread of viral infections is crucial to preventing this potentially disabling disease. Simple prevention measures to stress to all patients are: a) hand hygiene by washing your hands, b) control respiratory droplets by coughing/sneezing into your sleeve and then wash your hands, c) stay current with your immunizations, and d) stay away from those who are ill. Identifying patients with AFM is difficult. If suspected, it is important to act quickly with the assistance of local or state health departments in collaboration with the Centers for Disease Control and Prevention (CDC) to determine the causative factor. The CDC provides up-to-date information. Treatment has been unsuccessful using conservative measures, but there is hope for nerve transfer procedures in upper and lower extremities using microsurgery techniques. This is an unfolding story with more to come if this disease cannot be controlled or eradicated.

Objectives: Acute flaccid myelitis (AFM) is a serious condition that

primarily affects children. AFM is a type of Acute flaccid paralysis, a global terms for AFM and non-AFM etiologies. AFM is diagnosed by gray matter abnormalities in the spinal cord on MRI, or pleocytosis in the cerebral spinal fluid. AFM attacks spinal cord gray matter resulting in lower motor neuron injury and flaccid weakness in the extremities. Although the specific cause of most cases is unknown, viruses, toxins and genetic disorders have been implicated. Stopping the spread of viral infections is crucial to preventing this potentially disabling disease. Simple prevention measures to stress to all patients are: a) hand hygiene by washing your hands, b) control respiratory droplets by coughing/sneezing into your sleeve and then wash your hands, c) stay current with your immunizations, and d) stay away from those who are ill. Identifying patients with AFM is difficult. If suspected, it is important to act quickly with the assistance of local or state health departments in collaboration with the Centers for Disease Control and Prevention (CDC) to determine the causative factor. The CDC provides up-to-date information. Treatment has been unsuccessful using conservative measures, but there is hope for

nerve transfer procedures in upper and lower extremities using microsurgery techniques. This is an unfolding story with more to come if this disease cannot be controlled or eradicated.

No definitive cause; could be a variety of causes treatment is supportive. Flaccid paralysis, which means most patients with AFM will have sudden onset of limb weakness and loss of muscle tone and reflexes. Some, in addition to the limb weakness, may also experience one or more of the following symptoms: facial paralysis, oculomotor dysfunction, dysphagia, dysarthria or upper lid ptosis. (blepharoptosis – BLEE FAIR OP TOSIS) ectropion (lower lid ptosis), Numbness or tingling (paresthesia) is rare in patients with AFM, though some patients do experience pain in their arms or legs. Some patients may experience urinary retention.

The most severe symptom of AFM is respiratory failure which can occur when the diaphragm becomes weak.

Prevention is crucial to stop disabilities rapid treatment including screening, detection, and diagnosis.

Results: Acute flaccid myelitis (AFM) is a serious condition that primarily affects children. AFM is a type of Acute flaccid paralysis, a global terms for AFM and non-AFM etiologies. AFM is diagnosed by gray matter abnormalities in the spinal cord on MRI, or pleocytosis in the cerebral spinal fluid. AFM attacks spinal cord gray matter resulting in lower motor neuron injury and flaccid weakness in the extremities. Although the specific cause of most cases is unknown, viruses, toxins and genetic disorders have been implicated. Stopping the spread of viral infections is crucial to preventing this potentially disabling disease. Simple prevention measures to stress to all patients are: a) hand hygiene by washing your hands, b) control respiratory droplets by coughing/sneezing into your sleeve and then wash your hands, c) stay current with your immunizations, and d) stay away from those who are ill. Identifying patients with AFM is difficult. If suspected, it is important to act quickly with the assistance of local or state health departments in collaboration with the Centers for Disease Control and Prevention (CDC) to determine the causative factor. The CDC provides up-to-date information. Treatment has been unsuccessful using conservative measures, but there is hope for nerve transfer procedures in upper and lower extremities using microsurgery techniques. This is an unfolding story with more to come if this disease cannot be controlled or eradicated.

Conclusions: This review highlights clinical features of the increasing cases of acute flaccid paralysis associated with anterior myelitis noted in the United States from 2012 to 2015. Acute flaccid myelitis refers to acute flaccid limb weakness

with spinal cord gray matter lesions on imaging or evidence of spinal cord motor neuron injury on electrodiagnostic testing. Although some individuals demonstrated improvement in motor weakness and functional deficits, most have residual weakness a year or more after onset. Epidemiological evidence and biological plausibility support an association between enterovirus D68 and the recent increase in acute flaccid myelitis cases in the United States.