Nebraska Department of Health and Human Services

HEALTH ALERT NETWORK
Update

TO: Neurologists, Infectious Disease Specialists, Radiologists, and Public Health

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RE: Addition of Acute Flaccid Myelitis to Nebraska Reportable Disease List

DATE: July 29, 2016

Twenty-one confirmed cases of acute flaccid myelitis (AFM) have been reported to CDC from January 1 through June 30, 2016 among persons 6 months to 64 years of age. CDC is alerting public health officials to this increase and requesting prompt reporting and specimen collection of suspect AFM cases.

Background

Acute flaccid myelitis (AFM) is a rare syndrome characterized by the rapid-onset of focal limb weakness and abnormalities of the spinal cord gray matter on MRI. The number of AFM cases in the United States each year is not well-defined (the approximate rate among children is 1 per 100,000). However, an increase was observed in the fall of 2014. By July 2015, 120 pediatric cases of AFM had been documented among 34 states. This spike coincided with a national outbreak of enterovirus-D68 (EV-D68) and recent investigations have demonstrated an association between EV-D68 and AFM. No other specific etiologies have been identified for AFM although it is hypothesized that this syndrome may be virally mediated. The CDC and the Nebraska Department of Health and Human Services (NDHHS) would like your assistance with monitoring and reporting in order to evaluate etiology as well as establish the incidence of this condition.

Clinical Summary

Patients with AFM typically present with abrupt, asymmetric weakness in one or more limbs shortly after a febrile respiratory illness. The weakness is associated with areflexia and loss of muscle tone, and reaches a nadir within a few hours or days of symptom onset. Cranial nerve involvement is possible and may manifest as facial weakness, drooping eyelids, paralysis of the eye muscles or difficulty speaking/swallowing. Seizures, altered mental status and nuchal rigidity are uncommon neurologic symptoms seen in AFM. MRI findings demonstrate non-enhancing lesions in the central gray matter of the spinal cord. Lesions can be found in either the anterior or posterior horns and usually extend across several levels. Laboratory analysis of cerebrospinal fluid (CSF) reveals mild to moderate pleocytosis and normal to mildly elevated protein. Of note, the cytoalbuminologic dissociation that is characteristic of Guillain-Barre Syndrome (GBS) is not typically present in AFM.

Criteria for Reporting to Public Health

Report any illness to public health authorities that meets all of the following criteria:

A person with onset of acute focal limb weakness AND one or both of the following:

-A magnetic resonance image showing a spinal cord lesion largely restricted to gray matter, and spanning one or more spinal segments
-Cerebrospinal fluid (CSF) with pleocytosis (CSF white blood cell count >5 cells/mm3, may adjust for presence of red blood cells by subtracting 1 white blood cell for every 500 red blood cells present); CSF protein may or may not be elevated

Collectively, the clinical, radiologic and laboratory findings suggest that AFM is the result of an infectious process. An array of viral pathogens may be responsible, including poliovirus, non-polio enteroviruses, flaviviruses (i.e. West Nile virus, St. Louis encephalitis, Japanese encephalitis, and possibly Zika), herpes (i.e. CMV, Epstein-Barr virus), and certain strains of adenovirus. All of these should be considered and investigated in the setting of unexplained limb weakness.

At this point, no interventions or treatments have proven effective for AFM. This includes corticosteroids, IVIG, plasmapheresis, interferon and antivirals. Routine clinical management for severe neurologic disease, along with physical and occupational therapy, is the basic standard of care.

Current Recommendations

Clinicians are advised to collect specimens from patients suspected of having AFM as early as possible, ideally on the day of symptom onset. Consult with the Nebraska Public Health Laboratory for proper testing procedures of CSF, blood, stool and nasopharyngeal aspirates.

Furthermore, providers should report known prior cases diagnosed from January 2014 to the present as well as any future suspected cases of AFM, regardless of laboratory results, to their local health departments. Local health department personnel will assist with the investigation process as well as provide epidemiologic support.

AFM Case Investigation Form:
http://www.cdc.gov/acute-flaccid-myelitis/downloads/patient-summary-form.pdf

Additional Resources

CDC Acute Flaccid Myelitis
http://www.cdc.gov/acute-flaccid-myelitis/index.html

CSTE Case Definition
http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/2015PS/2015PSFinal/15-ID-01.pdf

CDC AFM Specimen Collection Information
http://www.cdc.gov/acute-flaccid-myelitis/hcp/instructions.html

Nebraska Local Health Departments
http://dhhs.ne.gov/publichealth/Documents/contacts.pdf

Nebraska Public Health Laboratory
http://nphl.org/