Kentucky Public Health
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Acute Flaccid Myelitis

Frequently Asked Questions

Q: What is acute flaccid myelitis (AFM)?

A: AFM is a syndrome characterized by sudden onset of limb weakness, sometimes accompanied by cranial nerve dysfunction (such as facial drooping or difficulty speaking). In many cases, distinctive lesions in the gray matter (nerve cells) of the spinal cord may be seen on neuroimaging.

Q: What causes AFM?

A: A number of infectious disease agents have been demonstrated to cause AFM, including **poliovirus** and other **non-polio enteroviruses, flaviviruses** (such as West Nile Virus), **herpesviruses**, and **adenoviruses**. A condition in which the body's immune system attacks and destroys body tissue that it mistakes for foreign material may also cause AFM.

Q: Were the AFM cases in 2014 related to the outbreak of severe respiratory illness caused by enterovirus-D68 (EV-D68)?

A: In August 2014, physicians in Colorado noted an unusual cluster of acute flaccid myelitis among children (http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6353a3.htm). This cluster occurred around the same time as an increase in cases of severe respiratory illness caused by EV-D68 (http://www.cdc.gov/non-polio-enterovirus/about/ev-d68.html#outbreak). This very strong temporal association (the cluster of AFM cases occurring at the same time as the EV-D68 respiratory outbreak) led many to suspect that the cluster of AFM cases might also have been caused by EV-D68 (http://www.ncbi.nlm.nih.gov/pubmed/25837569). It is biologically plausible that EV-D68 could have caused the cases of AFM in 2014, as other enteroviruses have been demonstrated to cause AFM. Also, EV-D68 has been previously identified in clinical specimens from a few patients with AFM. In those cases however, it is not clear whether the presence of EV-D68 was a coincidence or whether it was the cause of the AFM. Regardless, extensive testing of clinical specimens from reported AFM cases in 2014 did not find a clear and consistent pathogen.

Q: How can I report a case of AFM?

A: i) Patient/Caregiver: If you believe you or your child has symptoms that are compatible with AFM, please contact your doctor as soon as possible. Because AFM can be a severe illness, your doctor can help you determine next steps.

ii) Clinicians: If you believe your patient has symptoms that are compatible with AFM, please fill out the patient summary form[1] and contact your local health department or KY DPH. Please collect biological specimens[2] as soon as possible.

Q: What is the best treatment for AFM?

A: Since the potential causes of AFM are unclear, there is no recommendation for any specific treatment. However, an expert group of neurologists, infectious disease experts, pediatricians, immunologists, and public health experts convened in the fall of 2014 to arrive at a **consensus document for clinical guidance**[3] for patients with suspected AFM. Medical providers are encouraged to use the suggested guidance in the management of patients with AFM.

Q: Will CDC follow-up on reported cases of AFM?

A: Currently CDC is considering the most efficient ways of following up on cases of AFM detected through routine information gathering and close collaboration with state and local health departments and institutions caring for these affected children. CDC conducted a short-term follow-up survey on cases reported during the 2014 investigation, and received responses from roughly half (56) of the identified cases. A small number reported complete recovery of limb function after a median of about 4 months after onset of limb weakness. The majority reported some improvement of function, though it is not clear how much improvement occurred. A small number reported no improvement in limb function. No deaths were reported.

Q: How does AFM differ from other conditions that have limb weakness, such as Guillain-Barré Syndrome (GBS)?

A: While many of the signs and symptoms of AFM may be similar to other conditions that have limb weakness, such as GBS, AFM is characterized by distinctive MRI findings specific to the spinal cord gray matter. Upon more detailed testing, the differences between AFM and other conditions that cause limb weakness can be readily distinguished. In addition, treatment, prognosis, and diagnostic testing for AFM differ from other conditions, so it is important to provide the patient access to a physician with neurologic training and experience as quickly as possible after onset of unexplained limb weakness.

Q: Is it possible that patients with AFM are being misdiagnosed with other illnesses?

A: AFM is diagnosed based on a combination of clinical symptoms and specific laboratory or MRI findings. CDC is still trying to determine the full spectrum of illness that may present as AFM, such as acute transverse myelitis or Guillain-Barré syndrome, which can present in an identical fashion to AFM. CDC and local partners are working diligently to determine diagnostic criteria that would easily distinguish AFM from these other forms of acute flaccid paralysis. Therefore, it is possible that a case of AFM may be misdiagnosed as another illness.

References:

1. Patient Summary form- http://www.cdc.gov/acute-flaccid-myelitis/hcp/data.html#patient-form
2. Biological specimen collection- http://www.cdc.gov/acute-flaccid-myelitis/hcp/specimens.html
3. Consensus document for clinical guidance- http://www.cdc.gov/acute-flaccid-myelitis/downloads/acute-flaccid-myelitis.pdf