

AAN 66th ANNUAL MEETING ABSTRACT

Media Contacts:

Rachel Seroka, rseroka@aan.com, (612) 928-6129

Michelle Uher, muher@aan.com, (612) 928-6120

EMBARGOED FOR RELEASE UNTIL 4 P.M. ET, SUNDAY, FEBRUARY 23, 2014

Abstract Title: A Polio-like Syndrome in California: Clinical, Radiologic, and Serologic Evaluation of Five Children Identified by a Statewide Laboratory over a Twelve-month Period

Press Release Title: Mysterious Polio-like Illness Found in Five California Children

Objective: To report the recent experience with polio-like syndrome among children identified in California's Neurologic and Surveillance Testing program.

Author(s): Alexandra Roux, Sabeen Lulu, Emmanuelle Waubant, Carol Glaser, Keith Van Haren, MD

Background: Although poliovirus has been eradicated from most of the globe, other viruses can also injure the lower motor neurons of the spine, leading to a polio-like syndrome. In the past decade, newly identified strains of enterovirus have been linked to polio-like outbreaks among children in Asia and Australia. In 2012, the authors observed a cluster of polio-like cases among children at their medical centers and sought to systematically describe similar cases throughout the state of California.

Design/Method: We reviewed all polio-like cases among children who had biological samples referred to California's Neurologic and Surveillance Testing program from August 2012 to July 2013. Our inclusion criteria were acute onset of flaccid paralysis affecting one or more limbs with abnormal MRI imaging of the spinal cord sufficient to explain the clinical findings. We excluded children who met criteria for Guillain-Barre syndrome and botulism.

Results: We identified five children who developed a polio-like syndrome with lower motor neuron injury. All children presented with acute flaccid paralysis of one or more limbs that reached peak severity within 48 hours of onset. Three children had a prodromal respiratory illness. All had been previously vaccinated against polio-virus. Spine MRIs revealed non-enhancing T2 hyperintensities of the central gray matter while CSF was normal to mildly pleocytotic. They were treated with steroids, IVIG and/or plasma exchange with no apparent clinical benefit. Recovery of motor function was poor at 6-month follow-up. Two children tested positive for enterovirus-68, a rare virus previously associated with polio-like symptoms.

Conclusions: These cases highlight the possibility of an emerging infectious polio-like syndrome in California. This has important implications for disease surveillance, testing and treatment.

Study Supported by: The McHugh/Sprague Award from the Lucile Packard Foundation