

The Mysterious Polio-Like Disease Affecting American Kids

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COLUMBUS, Ohio—More than 100 cases of a polio-like syndrome causing full or partial paralysis of the arms or legs have been seen in children across the United States in recent months, according to doctors attending the annual meeting of the Child Neurology Society.

Symptoms have ranged from mild weakness in a single arm to complete paralysis of arms, legs, and even the muscles controlling the lungs, leading in some cases to a need for surgery to insert a breathing tube, doctors said.

The outbreak, which appears to be larger and more widespread than what has largely been previously reported by medical and news organizations, has neurologists and the Centers for Disease Control and Prevention scrambling to find out what is causing these cases and how best to treat it.

“We don’t know how to treat it, and we don’t know how to prevent it,” said Keith Van Haren, a child neurologist at Stanford University School of Medicine. “It actually looks just like polio, but that term really freaks out the public-health people.”

When asked whether they had seen a complete recovery in any of their patients, only two of the doctors raised their hands.

Instead, neurologists are now calling it acute flaccid myelitis: acute because it occurs suddenly, and flaccid because the affected limb or limbs become markedly weak. Myelitis is an inflammation of the gray matter—the nerve cells—in the spinal cord, showing up as a bright spot on an MRI.

Officially, the CDC reported on Thursday that it has confirmed 51 cases of the polio-like syndrome in 19 states, all of them occurring since August 1. But on Wednesday evening, when the moderator of the special session asked the 250 or so child neurologists in attendance how many had seen a recent case, about one-third raised their hands. Dozens kept their hands up when asked if they had seen two, three, five or more.

“That’s pretty remarkable,” said James J. Sejvar, the neuroepidemiologist at the CDC who is tracking the outbreak, in a telephone interview from Atlanta. “I would concur with the folks in attendance that the true number of cases is larger than the 51 we have identified so far. There are probably in reality over a hundred cases nationwide. How much more is difficult to say.”

Some of the children have had mild to moderate recovery of strength, doctors at the meeting said. But asked whether they had seen a complete recovery in any of their patients, only two of the doctors at the meeting raised their hands.

The moderator, Max Wiznitzer, a child neurologist at Case Western Reserve University School of Medicine in Cleveland, said that he and other neurologists are working closely with the CDC to put together treatment guidelines.

But, he said, “The bottom line is that right now we don’t have an effective treatment.”

Some doctors at the meeting said they fear the number of cases could be much higher than 100.

“I was on a conference call a few weeks ago with about 50 doctors from medical centers across North America,” Van Haren said. “Every center had seen cases. That puts the numbers real high, real fast.”

Neurologists suspect the current outbreak to be a rare but grim effect of the far larger epidemic of enterovirus 68 infections that occurred across North America this summer. That link, however, has yet to be proved. Even so, as cases of severe respiratory illnesses associated with the virus have waned with the advent of colder weather, so too have the cases of acute flaccid myelitis.

Since August, 13 cases have been seen in Colorado, according to Teri L. Schreiner, a pediatric neurologist at Children’s Hospital in Denver. Clusters of cases have also been reported by neurologists

in Missouri, Alabama, New York, Michigan, and Massachusetts.

When asked by Wiznitzer how many doctors had seen as many as 10 cases in recent months, Brenda Banwell, chief of neurology at Children's Hospital of Philadelphia (CHOP), raised her hand. At the CDC, Sejvar said, "It definitely appears that CHOP is seeing a large number of children with this presentation."

Mark Gorman, a child neurologist at Boston Children's Hospital, said he has seen six cases there since August 1.

"I've heard from colleagues in the region who have seen other patients," he said by telephone.

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While most of the doctors attending the conference said they had rarely, if ever, seen anything like the recent cases of paralysis, Gorman said he had seen a similar condition affect five children, back in 2008.

Whether more cases will be seen across the country next year, was the subject of debate.

"I hope to God it doesn't come back," Van Haren said. "It's hard to imagine it will leave completely. But people thought West Nile virus would wreak havoc in North America, and it really didn't. Viruses change over time. Sometimes they change for the better, and sometimes for the worse. It's possible that's what happened with enterovirus 68."

Speaking from his office in Maryland at the National Institute of Neurological Disorders and Stroke, Avindra Nath, chief of the neurological infections section, said that medical groups need to prepare for the worst while hoping for the best.

"With viral infections, things can become virulent very quickly and spread very quickly," Nath said. "Some kind of preparation is worthy of consideration."

Both the CDC and the Child Neurology Society are hard at work tracking the outbreak and developing treatment guidelines, Wiznitzer said. But he and others stressed that the public should understand that the condition so far remains exceedingly rare, particularly compared to the polio epidemics of the 1950s and before.

"This is nothing like that," he said. "There were tens of thousands of cases of paralysis with the polio virus epidemic."

Even so, the neurologists gathered here described children whose sudden paralysis bears an eerie resemblance to polio, with some able to breathe only with the help of a ventilator.

"These can be heartbreaking cases," Van Haren said.

The CDC is asking doctors who suspect that they have seen a case to report it to their state health department using a [form available online](#).

This article was originally published at <http://www.theatlantic.com/health/archive/2014/10/the-mysterious-polio-like-disease-affecting-american-kids/381869/>