Medical Xpress

Rare respiratory virus, paralysis spreads among US kids

September 30 2014, by Kerry Sheridan

An unusual respiratory virus has sickened more than 400 children across the United States, and the emergence of sudden paralysis in some Colorado youths is sparking concern among doctors.

The nationwide outbreak of enterovirus D68—which can cause wheezing and coughing—coincided with the hospitalization of nine children due to limb weakness in Colorado since early August, and officials are investigating if there is any link between the two.

The nine children in Colorado "had respiratory illness and later developed neurologic illness," the US Centers for Disease Control and Prevention said Monday.

In the meantime, experts are struggling to understand why so many young people—ranging in age from one to 18—have fallen ill from the virus in the past two months.

"It is concerning," said Robert Glatter, an emergency medicine physician at Lenox Hill Hospital in New York.

"It is not clear why, given the widespread nature of this virus, at this point it is now showing some neurological symptoms in a very small portion of patients," he told AFP.

"The investigation is ongoing to find if there is a link."

Eight of the nine children afflicted with paralysis are up to date on their polio vaccines.

Some are reported to be improving, and it remains unclear whether or not their paralysis will be permanent.

Can infect nervous system

Some enteroviruses, including D68, have been shown in rare cases in the past to be capable of causing neurologic symptoms and sudden muscle weakness.

"The virus can infect the central nervous system, causing injury to some of the cells and the spinal cord, and that is what actually leads to the paralysis," said Glatter.

The emergence of paralysis cases, so far only in Colorado, suggests "it is possible that the virus may be mutating," he added.

"It is not clear why some children are affected and others aren't at this point. So it is an ongoing puzzle that we are hoping to solve in the near future," said Glatter.

Meanwhile, the outbreak is expanding fast. Earlier this month, the CDC said about a dozen states had reported cases. By the end of September, 40 states were implicated.

Hand-washing as key defense

Enterovirus D68 is not new. It was first discovered in 1962, but has remained fairly uncommon, experts say.

About two dozen child paralysis cases were reported in California last year, though experts have not established any connections between the outbreaks.

Viruses in this family typically circulate in the late summer to early fall, before flu season begins in earnest.

If the seasons start to overlap, experts say the potential for dual infections could be particularly dangerous for children with asthma.

"Hopefully as the weather gets colder that will help the epidemic subside," said Roberto Posada, a pediatric infectious disease expert at the Kravis Children's Hospital at Mount Sinai in New York.

"I think the best advice for parents in terms of preventing infection is always hand-washing, hand-washing, hand-washing."

In the meantime, doctors are urging parents to keep a close eye on their children, and seek urgent medical care if they show difficulty breathing—even if they do not have a high temperature.

"About a third of kids do not have fever," said Glatter.

If parents see "wheezing and weakness, numbness, tingling with respiratory symptoms and congestion they need to go the hospital immediately. This is not a time to delay."

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