Medical Xpress

Similar to adults, obesity raises kids' odds for severe COVID-19

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If a child is infected with the new coronavirus, being obese appears to

greatly raise the odds for developing a severe form of COVID-19, a new study finds.

The report was based on 50 cases of pediatric COVID-19 severe enough to require admission to a New York City hospital.

Eleven (22%) of the 50 kids were obese, and six of the nine children who required a ventilator were obese, the study found.

Obesity has long been noted as a risk factor for adults with COVID-19, "so it was interesting that many of the hospitalized patients in this study had obesity and/or overweight," said researchers led by Dr. Philip Zachariah, a pediatrician at Columbia University Irving Medical Center in New York City. They published their findings June 3 in the journal *JAMA Pediatrics*.

None of the 50 children developed a dangerous inflammatory illness, similar to Kawasaki disease, which has been seen in rare cases among other children infected with the new coronavirus.

One doctor working on the front lines of the pandemic said his hospital has seen similar trends in kids.

"We found even higher rates of obesity in the kids that were really sick," said Dr. Charles Schleien, pediatrician-in-chief at Northwell Health in New Hyde Park, N.Y. "This actually is not unlike the adults, where obesity also played a key role in the severity of disease if you contracted the virus."

In the new study, Zachariah's group looked at the medical records of 50 children and adolescents under the age of 21 who were first tested for COVID-19 in March and the first two weeks of April.

Nine of the 50 cases turned out to be severe. Older children—averaging 14 years of age—were more likely to develop severe COVID-19, the study found.

Infants were largely spared, with none developing severe illness, the research showed.

Among severe cases, cough, shortness of breath and fever were very common, and nearly half (44%) of cases involved gastrointestinal symptoms, as well.

There was one piece of good news: Children with any kind of immune-system suppression did not seem at higher risk of developing COVID-19, although "the sample size is small and may not be reflective of the actual risk," Schleien noted.

For most of the young patients treated in the hospital, the course of severe illness was not long—76% were discharged within three days of being admitted. But a third required some form of respiratory support, including nine being placed on a ventilator, the Columbia team said.

In two cases, COVID-19 became extremely serious, blood oxygen levels fell and a sudden cardiac arrest occurred. One of these cases proved fatal, and the researchers said they are investigating whether a blood clot might have been involved. COVID-19 is known to boost clotting risks.

Hydroxychloroquine, a malaria drug that's since proven ineffective against COVID-19 in clinical trials, was tried in 15 patients. However, it appeared to be ineffective and was even tied to potentially dangerous side effects, the researchers added.

They did stress that "the small sample size of this descriptive study may additionally limit generalizability" to a broader population of children

with COVID-19.

Experts believe that in the vast majority of cases of infection with coronavirus, children experience few or no symptoms. But in rare cases, illness can develop, and "this retrospective description … adds important insights to the body of knowledge about the similarities and differences between pediatric and adult infection," said Dr. Michael Grosso, chair of pediatrics at Huntington Hospital in Huntington, N.Y.

"Much of what the investigators saw confirmed previous experience," Grosso said. "Children are less likely to die, infants do not fare worse [as they do with influenza], nor do the immunocompromised. However, obesity was a risk factor for severe disease and predicted the need for mechanical ventilation."

More information: The U.S. Centers for Disease Control and Prevention has more on the new coronavirus.

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