

Experts at UTHealth successfully treat severe case of COVID-19 in 3-week-old infant

28 April 2020



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In one of the first reported cases of its kind, a 3-week-old infant in critical condition recovered from COVID-19 due to rapid recognition and treatment by physicians from McGovern Medical School at The University of Texas Health Science Center at Houston (UTHealth). The case was published April 22 in the *New England Journal of Medicine*.

As more data is released on COVID-19, the original belief that [pediatric patients](#) are spared from the worst of the disease has been disproven.

"We are still so early in the research and data available on COVID-19, and as providers, we need to be aware that children can get critically ill from this virus," said Alvaro Coronado Munoz, MD, first author and assistant professor of pediatric critical care medicine at McGovern Medical School at UTHealth. "It's important for parents to understand that they should not delay seeking care for their children if there's any presence of fever or trouble

breathing."

The child first presented at a local hospital with [nasal congestion](#), rapid breathing, and reduced eating. Physicians there recorded a temperature of 97.0 degrees, high pulse rate, and low oxygen saturation. The child was transferred to a [pediatric intensive care unit](#), and Coronado and other [team members](#) were alerted. Upon arrival, the child had [low blood pressure](#) and hypothermia, as well as continued rapid heart rate and breathing. Lung X-rays revealed opacity and collapse in one of the upper lobes, indications of pneumonia.

As it was early in the pandemic, it would take a week for test results from a nasal swab to return as positive for the coronavirus, but physicians did not wait before moving into a COVID-19 action plan for the pediatric intensive care unit (PICU).

"Our team was called to admit the patient in PICU, and when we saw the X-ray, we were suspicious immediately that it could be the coronavirus. We took early precautions to protect our team and avoid the spread to health care providers," Coronado said. "We thought the child was sicker than the normal child we see. On top of what appeared to be COVID-19, the [child](#) also tested positive for the virus that causes the common cold."

The infant was transferred to a negative-pressure room in the PICU, and was intubated and placed on a mechanical ventilator for five days. While standard PICU protocol calls for noninvasive mechanical ventilation, doctors chose to intubate because the patient was in severe respiratory failure and COVID-19 was suspected. Physicians also placed the infant on a five-day course of hydroxychloroquine and azithromycin.

"Pediatric ICU has to adapt protocols to prevent

spread of the coronavirus, such as avoiding aerosolized treatments and considering safe intubation measures sooner than the usual," Coronado said.

After five days, the patient was discharged from the PICU. On day nine, the infant had recovered and was sent home without supplemental oxygen.

"While this case is limited to one single patient, it illustrates that severe COVID-19 cases in children can occur, but also be successfully managed," Coronado said.

More information: Alvaro Coronado Munoz et al, Late-Onset Neonatal Sepsis in a Patient with Covid-19, *New England Journal of Medicine* (2020).
[DOI: 10.1056/NEJMc2010614](https://doi.org/10.1056/NEJMc2010614)

Provided by University of Texas Health Science Center at Houston

APA citation: Experts at UTHealth successfully treat severe case of COVID-19 in 3-week-old infant (2020, April 28) retrieved 27 July 2022 from <https://medicalxpress.com/news/2020-04-experts-uthealth-successfully-severe-case.html>

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