Clinical trials investigate COVID-19 treatments

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The University of Illinois at Chicago is participating in two clinical trials for COVID-19 treatments.

COVID-19 is caused by a highly contagious virus called SARS-CoV-2 that results in acute lung injury and respiratory distress. There are currently no treatments for COVID-19.

In one trial, launched this week, a team from UIC is studying a drug previously approved by the U.S. Food and Drug Administration for treating rheumatoid arthritis. The drug is called sarilumab.

"Sarilumab targets cytokines, or small proteins, that are also seen in patients hospitalized with COVID-19," said Dr. Jerry Krishnan, UIC professor of medicine and principal investigator of the study.

The study includes investigators with expertise in pulmonary/critical care medicine, internal medicine, emergency medicine, pharmacy, nursing and human-centered design.

"This highly contagious virus carries unacceptably high morbidity and mortality because we do not have any evidence-based therapeutic options beyond supportive care—this study may change that," Krishnan said. "Randomized clinical trials in which subjects are assigned to either receive the investigational treatment or an inactive treatment—called a placebo—are the gold standard to understanding the harms and benefits of new interventions."

In the sarilumab study, hospitalized patients with COVID-19 who participate in the study will be randomized to one of three groups: sarilumab 200 mg, sarilumab 400 mg, or placebo, as a single IV infusion.

"Because of the life-threatening nature of COVID-19 among hospitalized patients, the study was designed to offer most study participants sarilumab; only 1 in 5 participants will be randomized to the placebo group," Krishnan said.

Krishnan said the placebo group is needed to help us understand the harms and benefits of two doses of sarilumab compared with what would have happened without sarilumab.

The adaptive phase 2/phase 3 sarilumab study is sponsored by Regeneron Pharmaceuticals as part of a public-private partnership with the U.S. Department of Health and Human Services, the U.S. Office of the Assistant Secretary for Preparedness and Response, and the U.S. Biomedical Advanced Research and Development Authority.

In another trial, launched last week, UIC researchers are investigating an antiviral drug previously studied as a treatment for Ebola in hospitalized patients with COVID-19. The drug is called remdesivir and the trial is funded by the National Institutes of Health.

In a news release, the NIH said remdesivir "has shown promise in animal models for treating Middle East respiratory syndrome (MERS) and severe acute respiratory syndrome (SARS), which are caused by other coronaviruses."

UIC principal investigator and professor of medicine Dr. Richard Novak said, "We urgently need safe and effective treatments for COVID-19 and, through this trial, we hope to learn if remdesivir is beneficial for patients with COVID-19.

"It's far too early to know if there will be a clinical benefit, but these kinds of trials are critical in the search for treatments."

The remdesivir study is a phase 3 clinical trial, and UIC is one of 75 centers in the nation participating in the trial.

For both studies, research participants will be enrolled through the University of Illinois Hospital.

Provided by University of Illinois at Chicago