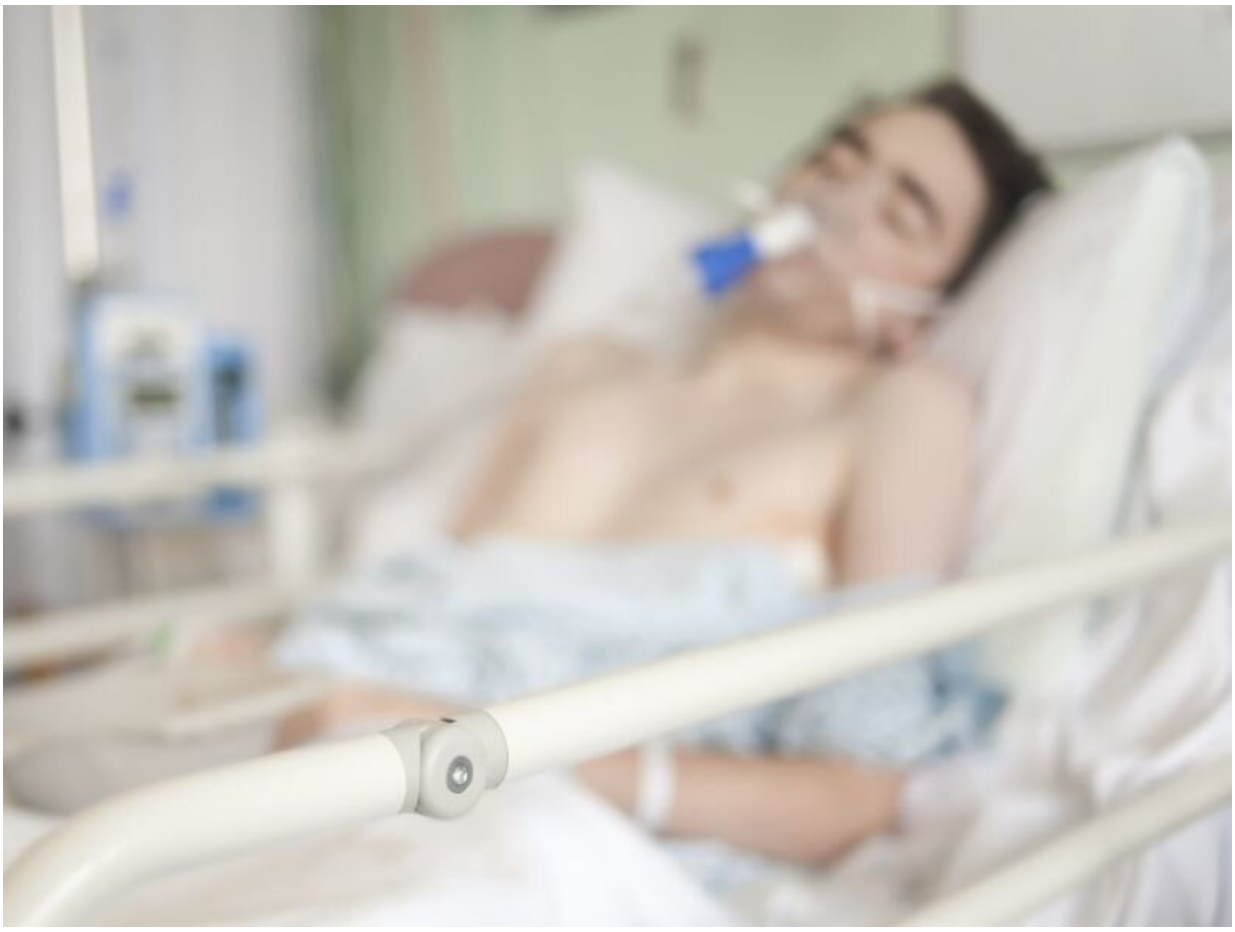
Researchers seek antiviral pill that would ease COVID severity

April 30 2021, by Dennis Thompson Healthday Reporter



(HealthDay)—COVID-19 research efforts must now shift toward the development of a pill that can prevent serious illness in the recently

infected, experts say.

"We need a pill that can keep people out of the hospital, and the time to develop that is right now," Dr. Rajesh Gandhi said during a Thursday media briefing by the Infectious Diseases Society of America. He is director of HIV Clinical Services and Education at Massachusetts General Hospital in Boston.

Such an antiviral drug would target SARS-CoV-2—the COVID-19 virus—during its most active phase in the human body, which is just prior to when people develop symptoms, Gandhi said.

"Based on all of our understanding from the last year, the virus is most active during that time," Gandhi said. "Just before people get sick, during those first few days up to a week, is when the virus is really replicating, making copies of itself.

"There, I think, is the need for a really effective antiviral," Gandhi continued. "What we need more than anything else right now is an oral drug, a pill that can prevent people with mild to moderate disease from getting more and more sick."

Efforts are underway to develop such a drug, and there are hopes that one might be available before the end of 2021, Gandhi said.

One experimental drug cited by Gandhi is being developed by Pfizer. A protease inhibitor like those used to treat HIV and hepatitis C, the new medication would curb production in the body of enzymes needed for the virus to multiply.

Others under development would target the coronavirus itself, disrupting the ability of the virus to replicate and spread, Gandhi said.

Few weapons in treatment arsenal to avoid hospitalization

Despite revolutionary success in developing COVID vaccines, there are few good treatment options to prevent people who've just contracted COVID from progressing toward severe symptoms that require hospitalization.

Monoclonal antibodies remain the sole treatment shown to prevent a mild infection from becoming serious, Gandhi said.

"We do think those have an important benefit in people who are outpatients with mild to moderate disease and who are at high risk for progression, so I think we should be using those more than we have been in the past because the evidence has become strong," Gandhi said.

But there are drawbacks to monoclonal antibodies, Gandhi said. They are delivered intravenously, which rules out their easy widespread use, and there are concerns that new COVID variants will develop resistance to the treatment.

Early in the pandemic, doctors had hoped to find an existing antiviral drug that would be effective against SARS-CoV-2, but so far those therapies have failed to deliver, Gandhi said.

"If we could have a repurposed drug, a drug that we have for some other reason, that would be even better, but thus far the repurposed drugs against the virus really haven't borne out," Gandhi said.

So, pharmaceutical companies are now turning to new antiviral agents such as Pfizer's experimental drug.

Pfizer CEO Albert Bourla told CNBC earlier this week that his company is working to bring the oral medication to market by the end of the year.

Antiviral combos may be key

Gandhi also noted another oral antiviral, molnupiravir, is being developed by Merck. The pill would be a five-day at-home treatment that would halt the progress of COVID in infected people, according to the *International Business Times.*

Swiss drugmaker Roche also is testing a third oral antiviral candidate, Gandhi said.

The sort of financial support given the development of COVID vaccines now is needed to find and test these sort of easily administered antiviral drugs, Dr. Adarsh Bhimraj said during the media briefing. Bhimraj is head of the Neurologic Infectious Diseases Section in the Department of Infectious Diseases at the Cleveland Clinic.

Researchers should also be open to the possibility of combining these oral medications in ways that would prevent drug resistance, he said, similar to the cocktails now used to hold HIV in check.

"The next step, once we start controlling the pandemic, is can we have combinations of antivirals that can be effective," Bhimraj said. "As a society we should invest in studying cheaper, easy-to-manufacture drugs in combination that would be effective in stemming the infection early on or even preventing the infection."

Better medications also are needed for people who have been hospitalized with COVID, the experts said.

At that point in the illness, antivirals won't make much difference because inflammation is causing the severe symptoms that require mechanical ventilation, Gandhi said.

"Once someone is in the hospital, the most effective drug that we have is dexamethasone. Making sure there are adequate supplies of that steroid, which tamps down inflammation, is the highest priority once someone is

in the hospital, along with oxygen," Gandhi said.

Clinical trials sleuth out best therapies

Remdesivir is the only antiviral medication shown to help hospitalized COVID patients, but its benefits are limited, Gandhi and Bhimraj said.

"It has an effect on shortening the time in the hospital, shortening the time until someone recovers, but it has not been proven either in the U.S. or in other places to save lives," Gandhi said. "It has a benefit, but it is not a transformative drug."

Combinations of different anti-inflammatory drugs should be investigated to improve treatment of hospitalized COVID patients, Gandhi said.

Gandhi and Bhimraj urged people to take part in clinical trials of these new drugs and combination therapies.

They cited clinical trials of the antidepressant fluvoxamine as an example.

The drug showed some promise in small studies that it could prevent mild cases of COVID from progressing, but it has been greeted with some skepticism.

"I'm really happy there is a phase 3 definitive trial going on that's large enough to say does fluvoxamine work or doesn't it," Gandhi said. "I would rush to tell people to take part in those studies, because that's where we get an answer.

"That's the whole lesson of the last year," Gandhi continued. "We've got to get an answer that's fair and definitive before we start using therapies. We used therapies last March that turned out not to work. We can't do

that again."

More information: The U.S. National Institutes of Health has more about COVID-19 treatments.

APA citation: Researchers seek antiviral pill that would ease COVID severity (2021, April 30) retrieved 13 December 2022 from https://medicalxpress.com/news/2021-04-antiviral-pill-ease-covid-severity.html