

Steroids other than dexamethasone may also help battle COVID-19

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(HealthDay)—The steroid medication dexamethasone has been proven

to help people severely ill with COVID-19. Now a new study hints that other drugs in the same class may also work—in the right patients.

The findings are from a review of one hospital's experience, not a clinical trial. So researchers said the results should be interpreted with some caution.

But the study suggests that a class of cheap, long-used medications—including, but not limited to dexamethasone—could aid in the COVID-19 fight.

The findings may also help pinpoint which hospitalized patients stand to benefit, and which ones could actually be harmed.

Researchers at Montefiore Medical Center in New York City looked at more than 1,800 COVID-19 patients admitted to their hospital in March and early April. Of those, 140 received a steroid within two days.

Some were treated with dexamethasone, but most received another drug called prednisone.

At first glance, steroid patients fared similarly to others: They were no less likely to die or to end up on a ventilator.

But a closer look revealed a critical difference. Among patients with signs of widespread inflammation in the body, steroid treatment cut the risk of death or ventilation by 77%. In contrast, the medications appeared to *increase* those risks when patients lacked evidence of inflammation, the researchers found.

It fits with what has been learned about COVID-19, according to Dr. Randy Cron, a professor at the University of Alabama at Birmingham.

It's thought that some of the worst effects of COVID-19 are often caused not by the virus itself—but by a massive immune system response called a cytokine storm. It floods the body with proteins (cytokines) that trigger widespread inflammation. That can cause potentially fatal organ damage.

Steroid medications like dexamethasone and prednisone—which are anti-inflammatory and suppress the immune system—make sense in that scenario, according to Cron. But if a COVID-19 patient does not have serious systemic inflammation, a steroid might backfire—hampering the immune system's ability to fight the virus.

"If you use them," Cron said, "you want to do it in patients who are having an overly exuberant immune response."

The U.K. trial that tested dexamethasone found that only certain hospitalized patients benefited. In this case, it was those who were sick enough to need oxygen or a mechanical ventilator. The drug cut their risk of dying by one-fifth to one-third.

But when hospital patients were not on respiratory support, the drug was no help.

The current study turned up a different line of demarkation: Blood levels of a substance called C-reactive protein (CRP), a marker of inflammation.

If patients' CRP was high (20 mg/dL and up), treatment with steroids cut the risk of death or ventilation by 77%.

But if CRP was low (less than 10 mg/dL), steroid therapy more than doubled those risks, the study authors reported.

That finding may be the more important one, according to study co-author Dr. Shitij Arora, a hospitalist at Montefiore and associate professor at Albert Einstein College of Medicine in New York City.

It highlights a group of patients, Arora said, that could actually be harmed by steroid treatment.

CRP tests are standard and cheap, according to Arora. But it's not clear that CRP alone is the best way to identify patients who should receive steroids, he said. Other [lab tests](#), in combination with CRP, might be even better, both Arora and Cron said.

And is prednisone as good as dexamethasone?

Arora said he suspects the benefits of dexamethasone reflect a "class effect," and are not limited to that one drug. But, he stressed, that's an "opinion." Clinical trials are needed to prove a treatment works.

Ongoing studies are testing other steroids. For his part, Cron said he'd be "very surprised" if [dexamethasone](#) was the only effective one. Having additional options would be a good thing, he noted, so the world is not reliant on one drug.

The findings were published online July 22 in the *Journal of Hospital Medicine*.

More information: The World Health Organization has more on [COVID-19 and dexamethasone](#).

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