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## **BRIEF19**

*A daily review of covid-19 research and policy.*

### **RESEARCH BRIEFING**

#### **Dexamethasone continues to show positive results for those with severe covid-19**

To date, dexamethasone, a steroid medication, is one of the only therapies to have been shown to have any beneficial effect when administered to patients with severe covid-19. This was previously shown by research published out of the RECOVERY trial (Randomized Evaluation of Covid-19 Therapy). Today, a new study released in the [\*Journal of the American Medical Association\*](#) shows further promise for this affordable and readily available medication.

Brazilian researchers presented data from the Covid-19 Dexamethasone (CoDEX) randomized trial. The trial involved 41 intensive care units and enrolled adults with confirmed or suspected covid-19 who were receiving mechanical ventilation for moderate to severe Acute Respiratory Distress Syndrome (ARDS). ARDS is a life-threatening condition of the lungs in which rapidly accumulating inflammation and fluid in the lungs limits the ability for oxygen to reach the blood, and therefore the rest of the body.

In the CoDEX study, eligible patients were randomized either to receive a 10-day course of dexamethasone or “standard of care.” The dexamethasone group received 20 mg for five days, followed by 10 mg for another five days. The team evaluated how many days patients did *not* require mechanical ventilation (“ventilator-free days”) during the first four weeks as the primary outcome. Other outcomes of interest included all-cause mortality over this time period, as well as clinical status at day 15. Of note, the providers were not blinded as to whether the patients did or did not receive dexamethasone, and what comprised “standard of care” was left to the discretion of the ICU teams.

Ultimately the trial was stopped early after data from the RECOVERY trial was published in July. Over approximately nine weeks of the study, 299 patients were randomized of which 151 received dexamethasone. The authors found that the mean numbers of days alive and off the ventilator was higher in the treatment arm by more than two days (6.6 vs 4.0). No significant difference in all-cause mortality was seen.

A few limitations were present in this study—namely that it was not blinded and it was terminated early. Furthermore, 35 percent of patients in the control group received steroids as part of the standard of care, which is interesting given how marked a difference was seen between the two treatment arms. Had standard of care excluded steroids, one wonders if the difference would have been even more stark.

Despite these limitations, data from this study reinforces that the use of dexamethasone in moderate to severe covid-19 has benefits and few negative consequences. Interestingly, another study also being released today in *JAMA*, examined hydrocortisone use in severe covid-19, and did *not* show a benefit. However, that trial was underpowered and also stopped early when the RECOVERY trial data was published. Dexamethasone is rapidly moving to the front of the line as a go-to treatment for severe covid-19 patients who may require mechanical support.

—*Christopher Sampson, MD, FACEP*

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*Brief19 is a daily executive summary of covid-19-related medical research, news, and public policy. It was founded and created by frontline emergency medicine physicians with expertise in medical research critique, health policy, and public policy.*