

Hydrocortisone linked to lower risk for death in severe pneumonia

March 23 2023, by Elana Gotkine



For patients with severe community-acquired pneumonia admitted to the

intensive care unit (ICU), hydrocortisone is associated with a lower risk for death by day 28, according to a study published online March 21 in the *New England Journal of Medicine* to coincide with the International Symposium on Intensive Care and Emergency Medicine, held from March 21 to 24 in Brussels.

Pierre-François Dequin, M.D., Ph.D., from the Université de Tours in France, and colleagues conducted a phase 3 trial involving adults who had been admitted to the ICU for severe community-acquired pneumonia to assess whether early treatment with hydrocortisone reduced mortality at 28 days. Participants were randomly assigned to receive intravenous hydrocortisone (200 mg daily for four or eight days, as determined by clinical improvement, followed by tapering for a total of eight or 14 days) or placebo. All participants also received standard therapy, including antibiotics and supportive care.

The trial was stopped after the second planned interim analysis when 800 patients had undergone randomization; 795 were included in the analyses (400 in the hydrocortisone group and 395 in the [placebo group](#)). The researchers found that death had occurred in 6.2 and 11.9 percent of patients in the hydrocortisone and placebo groups, respectively, by day 28. Among patients not undergoing [mechanical ventilation](#) at baseline, endotracheal intubation was performed in 18.0 and 29.5 percent in the hydrocortisone and placebo groups, respectively (hazard ratio, 0.59).

For patients not receiving vasopressors at baseline, the therapy was initiated in 15.3 and 25.0 percent in the hydrocortisone and placebo groups, respectively, by day 28 (hazard ratio, 0.59). The groups had similar frequencies of hospital-acquired infections and gastrointestinal bleeding.

"Early treatment with hydrocortisone reduced 28-day mortality among [patients](#) who had been admitted to the ICU with severe community-

acquired pneumonia," the authors write.

More information: Pierre-François Dequin et al, Hydrocortisone in Severe Community-Acquired Pneumonia, *New England Journal of Medicine* (2023). [DOI: 10.1056/NEJMoa2215145](https://doi.org/10.1056/NEJMoa2215145)

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Citation: Hydrocortisone linked to lower risk for death in severe pneumonia (2023, March 23) retrieved 18 May 2023 from <https://medicalxpress.com/news/2023-03-hydrocortisone-linked-death-severe-pneumonia.html>

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