
This article describes a randomized, controlled, open-label trial of either lopinavir-ritonavir twice a day for 14 days vs. standard care alone in adult patients with confirmed SARS-CoV-2. The trial included adults patients with confirmed SARS-CoV-2 infection, and an oxygen saturation (SaO2) of 94% or less while breathing room air or a partial pressure of oxygen (PaO2) to fraction of inspired oxygen (FiO2) ratio of less than 300 mm Hg.

Patients were randomly assigned in a 1:1 ration to receive either lopinavir-ritonavir (400mg and 100mg, respectively) twice a day for 14 days and standard care, or standard care alone. The primary end point was time to clinical improvement, which was defined as either time from randomization to improvement of two points on a seven-category ordinal scale or discharge from the hospital. A total of 199 patients with confirmed SARS-CoV-2 infection were randomized; 99 were assigned to the lopinavir-ritonavir group, and 100 to the standard care group.

Treatment with lopinavir–ritonavir was not associated with a difference from standard care in the time to clinical improvement (hazard ratio for clinical improvement, 1.24; 95% confidence interval [CI], 0.90 to 1.72). Mortality at 28 days was not significantly different between the lopinavir–ritonavir group and the standard-care group (19.2% vs. 25.0%; difference, −5.8 percentage points; 95% CI, −17.3 to 5.7). The percentages of patients with detectable viral RNA at various time points were similar. In a modified intention-to-treat analysis, lopinavir–ritonavir led to a median time to clinical improvement that was shorter by 1 day than that observed with standard care (hazard ratio, 1.39; 95% CI, 1.00 to 1.91).

The authors conclude that there was no benefit observed with lopinavir-ritonavir treatment beyond standard care in hospitalized adult patients with severe Covid-19. However, given the trend towards improved 28-day mortality (19.2% vs. 25.0%) and the relatively small number of patients enrolled in the trial, this combination therapy seems to at least warrant further study in a larger trial, if not off-label use, especially given the lack of proven treatment options for this disease.