

Editorial
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Is Longer Duration or Higher Dose of Steroid Use Effective in Critical COVID-19 Patients?: An Area of Uncertainty

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► See the article “Clinical Characteristics of COVID-19: Use of Steroids in Mostly Unvaccinated COVID-19 Patients Before the Omicron Variant” in volume 37, number 29, e228.

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In the early days of the COVID-19 pandemic, there was a controversy about the use of steroids. However, as the results of several clinical studies, including the RECOVERY trial,¹ have been reported, steroid use for COVID-19 patients who require oxygen therapy is establishing itself as a standard treatment measure. Various guidelines for COVID-19 recommend the use of steroids for moderate to severe patients, and it is usually recommended to administer dexamethasone 6 mg for 10 days or until discharge.^{2,3} However, it has not been sufficiently evaluated whether steroid use beyond the generally recommended regimen is helpful in patients who continue to be in severe condition.

Oh et al.⁴ described how steroids are used in real clinical settings and the characteristics of patients who have been treated with longer duration or higher dose of steroids. According to the study results, among the steroid group, 17.5% of the patients received longer duration or higher dose of steroid. The patients were older, had a longer hospital stay, and were applied mechanical ventilator or extracorporeal membrane oxygenation more frequently compared to patients who received regular doses of steroid. This means that physicians attempted to improve the prognosis by increasing the dose or the duration of steroid in patients with severe or critical state. The results of this study can serve as resource for hints for steroid use in treating severe or critical COVID-19 patients.

However, we still do not know whether longer duration or higher dose of steroid will be helpful for the COVID-19 patients. Few studies have compared prognosis according to steroid dose. One study compared the use of 8 mg and 16 mg of dexamethasone for the treatment of COVID-19-related respiratory distress syndrome and found that there was no difference in ventilator-free days, but the higher dose group showed improved time required to be liberated from the mechanical ventilator.⁵ Studies on optimal duration of steroid use are more limited, in particular, for the patients with persistent severe conditions.

Recently, there have been attempts to use steroids in relation to post-COVID condition, and there are reports that steroid use has helped improve the condition of some patients. However, sufficient evidence has not yet been provided as to which patients and which steroid regimen will be helpful.

As various research results and experiences have been accumulated in the treatment of COVID-19 patients, standard treatment strategies are gradually being established, but there are still many areas of uncertainty. The optimal steroid use for patients with severe or critical condition is one of these areas of uncertainty. It is hoped that related research will continue to be conducted in the future to find the best way to improve the prognosis of COVID-19 patients.

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