

The Development of Pharmacological Treatment for COVID-19

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Abstract

Facing the pandemic of emerging infectious diseases, in addition to non-pharmaceutical interventions, an effective drug can slow the spread of the epidemic and reduce the impact, which is an important weapon before the vaccine coming to fruition. Initially, the research of COVID-19 drug treatment was mainly based on the experience and development of the treatment for other coronavirus infections (SARS, MERS), for example, remdesivir, hydroxychloroquine/chloroquine, lopinavir/ritonavir and interferon. According to the result of the latest large randomized clinical trial, Taiwan Food and Drug Administration had conditionally approved remdesivir on May 30, 2020, for the treatment of severe SARS-CoV-2 infection. Although the virus was cleared in the initial small-scale studies of hydroxychloroquine/chloroquine treatment, a larger retrospective study found that hydroxychloroquine did not reduce the risk of death or intubation in patients with SARS-CoV-2 infections, furthermore, might cause side effects. Low-dose steroids (dexamethasone) was found to reduce the risk of mortality among patients with severe SARS-CoV-2 infections, which was currently the treatment option with the strongest scientific evidence. Before the best treatment evidence appears, medical personnel should avoid being affected by rumors or exaggerated messages, and should provide experimental treatments with the best available evidence, ethical approval and patient's informed consent. The government and scientific societies should also systematically collect patients' treatment information and effectively analyze these valuable treatment experiences.

Keywords: SARS-CoV-2, emerging infectious diseases, treatment, clinical trial, pandemic

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Received: Jul. 17, 2020

Accepted: Jul. 17, 2020

DOI: 10.6525/TEB.202008_36(16).0003