A Pharmacological Study on COVID-19

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DESCRIPTION

The pandemic of coronavirus disease (COVID-19) is caused by the novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which is an unprecedented challenge in terms of identifying effective prevention and treatment medicines. The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) caused global pandemic of novel coronavirus disease 2019 (COVID-19) began in Wuhan, China. It has since spread worldwide. The COVID-19 pandemic is the most serious worldwide public health problem with the potential to kill millions of people.

Coronaviruses belong to a large family of viruses called Coronaviridae. Several members of this family circulate throughout the human population and frequently target the upper respiratory system, causing mild to moderate symptoms like the common cold. On the other hand, some coronaviruses can cause life-threatening sickness. SARS-CoV and MERS-CoV are coronaviruses that spread from animals to humans and cause severe sickness.

Clinicians need accurate evidence regarding successful medicinal therapies for SARS-CoV-2 infection, given the rapid pace of scientific discovery and clinical data generated by the huge number of persons affected by the disease. The efficiency in which clinical trials evaluating potential COVID-19 treatments were conducted illustrates both the need for and possibility of producing high-quality evidence even in the midst of a pandemic. The diseases were generally characterized as "pneumonia of unknown cause" by doctors and clinicians. The epidemic then spread over the world, affecting nearly 187 countries.

WHO initially declared it a "health emergency," but later changed and declared it a "pandemic." A wide range of mild to severe respiratory problems is among the clinical symptoms associated with the disorder. Patients are classified into three groups based on the severity of their symptoms: mild, moderate, and severe. The death rate is believed to be between 2 and 5%. The fatality rate, on the other hand, varies every country. The mortality rate was also found to be high among elderly patients and those with comorbidities such diabetes, cardiovascular illness, immune-suppressive diseases, and cancer.

Treatment

There is no approved treatment for coronavirus disease (COVID-19), so clinicians must rely on drug repurposing. However, the results of different studies are often incompatible, making it difficult to draw strong conclusions. This publication systematically pharmaceutical therapies for COVID-19, because clinicians require reliable data to treat COVID-19. A systematic search of observational studies and clinical trials on the treatment and prevention of COVID-19 was conducted utilising various databases.

Systematically investigate if any of the available drugs in the Electronic Health Record (EHR) can be repurposed as potential treatment for coronavirus disease (COVID-19). To estimate the influence of drug exposure on COVID-19 disease outcomes, multivariable logistic regression with overlap weighting using propensity score was used for each drug trial. The exposure of interest was a patient's exposure to a treatment between three months before the pandemic and the diagnosis of COVID-19.

In addition to the local standard of care, the WHO Solidarity PLUS Trial will initially test three treatment arms: artesunate, infliximab, and imatinib. An independent group of specialists identified these treatments after a thorough review of prospective drugs.These medications were chosen for their potential to lower mortality based on existing data.

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