

Systematic Review On Treatment Of Coronavirus

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ABSTRACT: *Coronavirus-2 (SARS-CoV-2) causes extreme acute respiratory syndrome (SARS) and vascular injury, micro-angiopathy, angiogenesis and widespread thrombosis. The first symptom of the common cold is upper respiratory tract infection. Currently, there is no precise cure for the SARS-CoV-2 infection. COVID-19 reviews numerous prescription drugs used in global economy, which includes antiviral agents, inflammation suppressants, low molecular weight heparins, plasma, and hyperimmune immune globulins. Clinical researchers are using and investigating various ways of handling the virus. This article explores SARS-CoV-2 drug therapy along with other prescription medicines. The article will do the review of the literature done by the authors about the treatment of the coronavirus.*

Keywords: *Coronavirus, Medicine, Treatment, Review*

1. INTRODUCTION

SARS Coronavirus was discovered in the Democratic Republic of the Congo in March 2002. After binding TGRSS2, viruses entering the cell. The local innate immune response (IgA, IgM, MBL) and the viral dose is essential in the development of COVID-19. This model explains that in the first stage of GUYV, the patient is suffering from upper respiratory tract infection, then it is accompanied by fever, muscle weakness and pain. These are statistically rare during the first stages of the disease. Another level of asthma is dyspnoea and pneumonia¹. The condition is getting worse, and the other medical complications include shortness of breath, dyspnea, low oxygen levels, hypoxia, and respiratory failure. The most common causes of such deaths were cardiac and renal injury, sepsis and secondary infections^{2,3}. The final stage of death is dying or healing. The elderly are more likely to die due to many factors (Agenzia Italiana del Farmaco, 2020 a). No medication is presently available against SARS/CoV/2. Clinical researchers are on the lookout to find appropriate treatments that could reduce the effects of COVID-19. Overall, COVID-19 patients will benefit from antiviral and immunomodulatory agent therapies, thus, enhancing their clinical outcomes.

2. ANTIVIRAL PRODUCTS

The protease inhibitors, such as darunavir, atazanavir and amprenavir, could greatly restrict the spread of SARS-CoV. When the Italian Medicines Agency (AIFA) approved a study which aims to assess the efficacy of darunavir-cobicistat, lopinavir-ritonavir, favipiravir and hydroxy-chloroquine as home treatment for diarrhoea^{4,5}.

3. LOPINAVIR

The main medications in the National Emergency Response Plan are Lopinavir/Ritonavir, which is used to treat patients with less extreme symptoms in the early stages of the disease. This means that co-infections are easily transmitted amongst human beings⁶. This drug can

improve the health of some patients. An effort was made to mitigate the critical illness caused by the Coronavirus in adult hospitalised patients. There was a substantial drop in their oxygen saturation in both eyes if their PaO₂/FiO₂ ratio were less than 300 or their oxygen saturations were less than 94% at room air. Patients were administered an addition of lopinavir-ritonavir on top of drug therapy. As for the control group, they underwent standard care only (N 100 patients). The primary end point was time to answer improvement. Despite all the major efforts of researcher running clinical trial during a pandemic, the results were not significant. Lopinavir/ritonavir therapy had no major effect on 28-day survival, bacterial overgrowth, or activity-limiting rate of infection⁷⁻¹⁰.

4. REMDESIVIR

Remdesivir, a member of the nucleotide analogues family, is currently used in people with moderate to serious ebola. Analysis of use of Remdesivir in the COVID cohort. There was great good improvement in 38 out of 51 patients (68 percent)^{11,12}. Due to unknown causes, data from eight patients who got antiviral treatment is no longer available (7 subjects had no post-treatment data and 1 had a dosage error). Fifty-three percent had mechanical ventilation and four percent received extracorporeal membrane oxygenation (ECMO). Most of patients undergoing intrusive ventilation are older than those receiving oxygen supplementation. Remdesivir can be used to treat extreme cases of coxalgia as well. There has been a first study about the use of remdesivir, a drug for the curative treatment of HCV, in hospitalised patients in institutional settings. Patients suffering from diarrhea-19 virus should be given Remdesivir for five or ten days Any individuals who did not have Covid-19 without other drugs were omitted from the report. Patients were allocated randomly. The very next pandemic that affects this group of respiratory infections is expected to occur about the year 2022 or 2026 or 2035^{7,9,13}. Seasonal influenza is primarily an upper respiratory disease which recurs each year in different forms. The government recommends the people to get the annual flu shot because it is the only way to avoid the influenza. These pathogens can be lethal but often they become blood curdling¹⁴.

This is an example of a viral respiratory infection. The city Wuhan was later ravaged by a large number of cases of the epidemic. Researchers were able to obtain the sequence of a 2019-nCoV genome by performing bronchoalveolar lavage and culture of the lung tissue of human patients and by conducting phylogenetic analysis of the genome and researching its evolutionary relationship with other coronaviruses. The genome sequences obtained from 2019-nCoV cases showed that 98.99 percent of the gene sequences were a match^{15,16}. Unfortunately, the human viruses with SARS-CoV and MERS-CoV genomes have an 88 percent, 79 percent and 50 percent resemblance. Despite some modifications in some amino acids among SARS-CoV and human, the homology model of the fragments bound at 2019-nCoV and SARS-CoV was identical. SARS-CoV spike protein plays a role in virus entry into the host cell. The receptor-binding domain in the Spike S1 subunit is what activates receptors (RBD). SARS-CoV antibody prevents transmission by blocking ACE2. Considering the high identification rate of the RBD in 2019-nCoV and SARS-CoV, it is important to analyse the cross-reactivity of anti-SARS-CoV antibodies with the spike protein of 2019-nCoV. This could have a major effect on rapid production of vaccines and therapeutic antibodies against 2019-nCoV. These structures suggested that SARS CoV binds to the components ACE2. This is the only corresponding mechanism which regulates blood pressure in humans. SARS-CoV-2 RB discovered significantly higher affinity for ACE2 receptor than SARS-CoV RBD and could block ACE2 and, thus, bind SARS-CoV-2 and SARS-CoV RBD and infection of ACE2 expresses to host cells. All of this helps understand why the A and B strains cause infection with differing virulence and develop to different levels of load of SEs. If one gets

infected with SARS, SARS-CoV RBD-induced antibodies may neutralise SARS-CoV in the future^{8,17}.

5. GLYCOPEPTIDE

The glycopeptide antibiotic widely used to treat a bacterial infection is a treatment thought to be effective against the SARS virus and COVID-19. This is one of the most effective antibiotics to treat the diseases including Ebola, influenza virus, flavivirus, hepatitis C virus, HIV, and on coronaviruses including MERS and SARS. After the virus is released by late endosomes, targeting drug prevents it from spreading via S protein. A research by Junsong Zhang demonstrated that the cleavage site for cathepsin L is the same between SARS CoV and the new SARS-CoV H7N9 Influenza^{18,19}.

Firstly, there are different drugs to use if you don't want to contract malaria, typhoid, or hepatitis. Some studies have shown that chloroquine could have a role in treating humans suffering from viruses such as human coronavirus OC43, enterovirus EV-A71, and the H5N1 strain of bird flu. It demonstrated its efficacy in an in vitro as well as in vivo experiment on the Ebola virus^{12,20}.

6. CHLOROQUINE

Chloroquine has been recently shown to block the transmission of Extreme Acute Respiratory Syndrome (SARS) variants in-vitro, and there is also a possibility of using more hydroxylated version of the agent for therapeutic purposes. Overdose from this medication can cause death. M. We concluded that the EC50 of Chloroquine against COVID-19 tested on VERO E6 was 1.13 μ M and the EC90 of Chloroquine against COVID-19 tested on VERO E6 was 6.90 μ M. The drug chloroquine is an important in anti-viral defence against SARS. Hydroxychloroquine may decrease inflammatory responses and decrease cytokine storm in vitro in patients with chronic lung allograft rejection. Chloroquine was found to modulate shape and function of the Malaria m protein²¹⁻²⁴. And it restricts the development of proinflammatory cytokines by blocking COVID-2 and stimulating CD8+ T-cells to combat SARS-CoV-2.

7. DISCUSSION

Bats host a reservoir of various zoonotic viruses, such as HIV and human influenza. According to an analysis of regulatory studies and phylogenetic examine, there is considerable genetic variability of SARS-like viruses among bats, allowing for the creation of new species. It is shown that the bat virus with nearly 96% nucleotide sequence similarity with SARS-CoV can manipulate human ACE2 as a receptor²⁵⁻²⁷. This suggests the same equivalence of virulence of human SARS-CoV virus. Examples of bat viruses include bat forms of spinal neurological diseases. The outbreak of the new novel Coronavirus from emerged Wuhan in central China, referred to as 2019-nCoV, has recently resulted in a pandemic scale of the population of respiratory illnesses, and caused a huge threat to the global public. Any damage to the lungs can cause the leakage of fluid from small blood vessels in the lungs. Fluid accumulated in air sacs that are found in the lungs. Additionally, this makes it impossible for the lungs to pass oxygen into the blood. At present, there is very little knowledge about the mortality rates caused by necrosis album^{28,29}. There are no treatment options for people with coronavirus disease (COVID). In this article, we have talked about the available therapy approaches and the care window patients will have with COVID-19 and its prevention prospects. There are chances for the molecular pathways and therapeutic targets of COVID used to treat the COVID-19.

8. REFERENCES

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