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Probable drugs being tested on covid-19 by different countries from past few months

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Abstract

Coronavirus disease is an infectious disease. At this time there is no specific vaccine or treatment for COVID-19. However, there are many ongoing trials evaluating potential treatment. As it spreads over 200 countries and territories across the globe, and was characterised as a pandemic by the world health organisation. Morethan 200 clinical trials of covid-19 treatment or vaccines that are either ongoing or recruiting patients. There are some drugs like Favipiravir, Hydroxychloroquine, Remdesivir, Losartan, etc which are mentioned in this article. Still some drugs have been under testing.

Keywords : Favipiravir , Hydroxychloroquine, Remdesivir, Losartan, Coronavirus.

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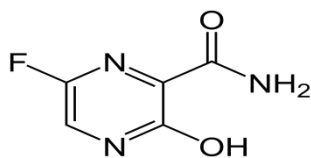
Introduction

The world is shaken by the COVID-19 also known as coronavirus, as it spreads over 200 countries and territories across the globe, and was characterised as a pandemic by the world health organisation. Morethan 200 clinical trials of covid-19 treatment or vaccines that are either ongoing or recruiting patients. The drugs being tested range from repurposed flu treatments, failed ebola drugs, and some malaria treatments drugs that were developed decades ago. Here, we take a look at several of the treatments that doctors hope will help fight against COVID-19 [1].

Japan flu drug

It is developed by Fujifilm Toyama chemical japan is showing outcomes in treating at least mild to moderate cases of COVID-19. It is known as Favipiravir, its brand name Avigan, it is an antiviral medication used to treat influenza in japan. Also to treat some infections. It is pyrazinecarboxamide derivative. Its other favipira, favilavir, T-705. It was medically approved in the year 2014 by japan. It became a generic name in the year 2019. Chemical formula C₅H₄FN₃O [2]. The mechanism

of action is thought to be related to selective inhibition of viral RNA-dependent RNA polymerase 2. It induced lethal RNA transverse mutation, producing a nonviable viral phenotype. It is available in both oral and intravenous formulations. Human hypoxanthine guanine phosphoribosyltransferase (HGPRT) is believed to play a key role in this activation process. In 2014, favipiravir was approved in japan for stockpiling against influenza pandemic. Favipiravir was being studied in China for experimental treatment of the emergent COVID-19. Trials are also being planned in japan. The drug has been approved for use in clinical trials of coronavirus disease 2019 in china. Italy approved the drug for experimental use against COVID-19 and has begun conducting trials in three regions most affected by the disease. It also shows the effect on ebola patients at starting stages [3].

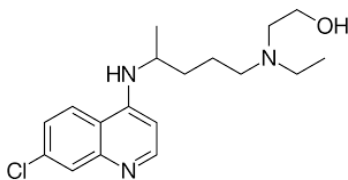


Hydroxychloroquine

Its brand name plaquenil among others, it is a medication to prevent and treat malaria. It also includes in the treatment of rheumatoid arthritis, lupus, and porphyria cutanea tarda. It is an oral dosage form. It has also been studied for the treatment of coronavirus disease. It is an approved drug by the United States and its most prescribed drug in the United states. Chloroquine and hydroxychloroquine have been found to be effective on SARS-CoV-2, and reported to be effective in chinese covid-19 patents⁵. Besides that FDA warns the use of hydroxychloroquine for coronavirus outside of hospitals ⁴.

Hydroxychloroquine and its more toxic analogue chloroquine have shown efficacy against SARS-CoV-2, found to be efficient in Covid-19 patients in China. The in-vitro studies demonstrated the anti-SARS-CoV activity of hydroxychloroquine with higher clinical safety profile and fewer drug-drug interactions than chloroquine ⁶.

It is a chemical formula C₁₈H₂₆ClN₃O and is also called Hydroxychloroquine sulfate.



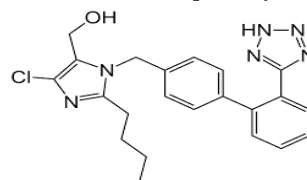
Ebola drug

Remdesivir, an experimental antiviral developed by Gilead for use against Ebola but since pressed into study for the coronavirus. The evidence suggests that remdesivir could treat COVID-19. The drug was found not to be effective in Ebola, but in lab studies, it has proven effective at inhibiting the growth of similar viruses, severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS). In a petri dish, remdesivir can prevent human cells from becoming infected with SARS-CoV-2 ¹⁰.



Blood pressure drug :

Losartan is a drug used to treat high blood pressure, sold under the brand name cozaar among others, it is also used to treat diabetic kidney disease, heart failure, and left ventricular enlargement. It is taken by oral route. Some scientists hoped to help patients with COVID-19. The University of Minnesota has launched two clinical trials. Losartan works by blocking a receptor, or doorway into cells that the chemical called angiotensin II users to enter the cells and raise blood pressure. SARS-CoV-2 binds to angiotensin converting enzyme 2 (ACE2) receptor, and it's possible that it may prevent the virus from infecting cells. A recent study in Italy found that three quarters of the patients who died had hypertension, and the authors propose this is one reason for their increased susceptibility ⁹.



Vitamin-C

Some chinese journals of infectious diseases, the use of high dose of vitamin C as a treatment for hospitalization of people with COVID-19. Doses that are magnitudes higher than the daily value are recommended to be given through IV to improve lung function, this may help to keep the patients off mechanical ventilation or life support 7. A 2019 review found that both oral and IV high doses of vitamin C treatment may aid people admitted to intensive care units (ICU) for critical conditions as they stay length by 8% and shorten the duration of mechanical ventilation by 18.2% 8 . chinese researchers have also registered a clinical trial to study the effectiveness of vitamin C in hospitalized patients. It's important to note that vitamin C is not yet a standard medicine for treating the COVID-19 patients because it is due to lack of evidence. Though high dose IV vitamin C is currently being tested to see if it can improve lung function in people with COVID-19. They may include some side effects like diarrhea .



Conclusion

No medicines are proven to treat the new coronavirus which has emerged from china. As it spreads over 200 countries and territories across the globe, and was characterised as a pandemic by the world health organisation. Morethan 200 clinical trials of covid-19 treatment or vaccines that are either ongoing or recruiting patients. Still some drugs have been under testing. The drugs which are mentioned above are Probable drugs being tested on COVID-19.

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