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ANTIVIRAL TREATMENT OPTIONS FOR COVID-19 BY REDUCTION OF VIRAL LOAD AND VIRAL SHEDDING

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Summary

The coronavirus disease 2019 (COVID-19) virus is a public health emergency of international concern, without known effective pharmaceutical treatment so far. It is difficult to treat infected patients who are experiencing acute respiratory failure, liver or cardiac injury, gastroenteritis and many other complications without any drug recommendation. Reducing the viral load is the most important key for Covid-19 treatment, where complication due to infection is highly correlated with the number of viral particles present in the lung and other organs of the patient. Most *antivirals* are effective against a wide range of viruses, where they inhibit viral development. Some of the possible antiviral treatment options for COVID-19 could be discovered from flu viral treatment that had led to quick respiratory illness recovery through reduction of viral load and viral shedding.

Baloxavir marboxil

Baloxavir marboxil is use in treatment of influenza A and influenza B flu. Baloxavir has reduced the viral load 1 day after initiation of the regimen; evidenced found in patients with uncomplicated influenza from two randomized, double-blind, controlled trials [1].

DAS181

DAS181 inhibits parainfluenza infection to respiratory cells, also protects human lung tissue and pneumocytes from avian influenza virus H5N1. Significant decreased in viral load and viral shedding in participants infected with influenza; evidence from trial encompassing 3 influenza seasons from 2009-2011 in both the Northern and Southern Hemispheres involving 177 infected participants [2].

Oseltamivir

Oseltamivir is Influenza-specific dosing for Tamiflu. Less viral shedding and improved health was found in oseltamivir treated adults with naturally acquired influenza; evidence from 726 healthy non-immunised adults with febrile influenza-like illness in a randomised controlled trial [3].

Recommendations for future research

This article suggests three potential antiviral which should be considered in the clinical management and treatment for covid-19. But there could be more antiviral candidate that could reduce viral load and viral shedding which is not discussed here. Future research should include clinical trials on these candidates individually and in combination to access patient recovery from COVID-9 complications.

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