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Opinion

Ivermectin for Treatment of COVID-19?

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Abstract: Many attempts have been made to repurpose existing and approved drugs for the treatment of COVID-19 infection. This involves anti-malarial drugs such as hydroxychloroquine and chloroquine, which have been shown to be less successful than initially believed, with a substantial risk of often fatal complications and interactions. This also involves Remdesivir, which has been shown to decrease recovery time significantly in hospitalized patients. However, for patients who are not yet hospitalized, there is no currently accepted treatment. Treating patients before they need to be admitted or even prophylactically could greatly decrease the load on hospitals, protect healthcare workers and reduce the spread of COVID-19. An in-vitro study indicated that Ivermectin was dynamic against COVID-19-infected cell. Ivermectin has antimicrobial, antiviral, and anticancer, immunomodulatory properties. This drug could reduce the viral load in COVID-9 infected patients, with potential effect on disease progression and spread. Therefore, Ivermectin may be a therapeutic choice for treatment of COVID-19, however, there is still a lack of evidence-based studies to support ivermectin treatment of patients with COVID-19.

Keywords: Coronavirus, COVID-19, Ivermectin, Treatment, Review

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Research Opinion

COVID-19 is caused by SARS-CoV-2, a new corona virus that quickly spread throughout the entire world [1]. It emerged in Wuhan, Hubei Province, China, in December 2019 [2]. The outbreak spread quickly, resulting in an epidemic throughout China, as well as other countries around the world. The World Health organization (WHO) declared the COVID-19 outbreak as a pandemic on March 2, 2020 [3]. By March 16, 2021, there were more than 120 million individuals that have been diagnosed and more than 2 million have died as a result of the worldwide illnesses [4].

The common symptoms of COVID-19 infection include fever, dry cough, shortness of breath, and breathing difficulties less common symptoms include anosmia, sore throat, runny nose, vomiting and diarrhoea [5]. Early reports from Wuhan showed that 2-10% of patients with COVID-19 infection had gastrointestinal symptoms such as diarrhoea, vomiting and abdominal pain,10% presented with diarrhoea and nausea 1–2 days before the development of fever and respiratory symptoms [6].

To effectively minimize the spread of COVID-19 and especially the associated deaths, a highly effective treatment option is needed [7].

Many attempts have been made to repurpose existing and approved drugs for the treatment of COVID-19 infection [8]. This involves anti-malarial drugs such as

hydroxychloroquine and chloroquine, which have been shown to be less successful than initially believed, with a substantial risk of often fatal complications and interactions [9]. This also involves Remdesivir, which has been shown to decrease recovery time significantly in hospitalized patients [10]. However, for patients who are not yet hospitalized, there is no currently accepted treatment.

Treating patients before they need to be admitted or even prophylactically could greatly decrease the load on hospitals, protect healthcare workers and reduce the spread of COVID-19 [11].

An in-vitro study indicated that Ivermectin was dynamic against COVID-19-infected cell [12]. Ivermectin has antimicrobial, antiviral, and anticancer, immunomodulatory properties [13]. This drug could reduce the viral load in COVID-19 infected patients, with potential effect on disease progression and spread [12]**.** Another study was conducted in Egypt at Banha University showed that addition of Ivermectin to standard care therapy is very effective drug for treatment of COVID-19 patients with significant reduction in mortality (99% reduction). Ivermectin had decreased the incidence of infection in health care and household contacts up to 2% compared to 10% in non ivermectin group when used as a prophylaxis [14].

Therefore, Ivermectin may be a therapeutic choice for treatment of COVID-19, however, there is still a lack of evidence-based studies to support ivermectin treatment of patients with COVID-19.

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