Dr. Steve's Field of Vision

Ivermectin and Merck's Molnupiravir

Ivermectin is frequently characterized as a drug used only to treat roundworm infections in horses and other animals. Detractors often fail to tell the real story that this old drug, with a very safe side-effect profile, also exists in human formulations and won a Nobel Prize in Medicine in 2015 for its effectiveness in treating parasitic infections in humans. Those human parasitic infections often result in the victims of the disease becoming blind. Ivermectin is listed as an "essential medicine" by the World Health Organization (World Health Organization Model List of Essential Medicines, 21st List, 2019. Geneva: World Health Organization; 2019. Licence: CC BY-NC-SA 3.0 IGO).

Ivermectin has much research behind it demonstrating its effectiveness for treating COVID-19 and there is a web site that is tracking—in real time—new studies that are emerging that are studying Ivermectin in the prevention and treatment of COVID-19 (https://ivmmeta.com). This web site currently reports that there are now sixty-four clinical trials that have been completed, and thirty-two of these trials are of the "randomized controlled" variety (the GOLD STANDARD in medicine to find if some treatment method works or doesn't work). A quick review of the findings indicates an 86% improvement in prevention, 66% improvement when used early in treatment, 40% improvement when used as late treatment and 62% improvement in mortality. That's the quick and dirty summary, but don't take my word for it, check the web site included above so you can see for yourself.

In a previous post I also talked about new drugs that are being produced by Pfizer and Merck that have similar mechanisms of action as Ivermectin for treating Coronavirus infections. The drug from Merck is known as Molnupiravir. Merck's recent press release claims that their new drug has 50% effectiveness against mortality and hospitalization for COVID-19.

A study was published in August comparing Ivermectin and Molnupiravir and was published in the Austin Journal of Pharmacology and Therapeutics (Ajayi AAL. Drugs shown to inhibit SARS-CoV-2 in COVID-19 disease: comparative basic and clinical pharmacology of molnupiravir and ivermectin. Austin J Pharm and Ther. 10-August-2021).

The article compares and contrasts the two drugs and concludes that both drugs are well absorbed by the body, both drugs inhibit the replication of the coronavirus, Ivermectin has a longer time that it acts in the body versus Molnupuravir (81-91 hours versus 7

hours) and that, “Both Ivermectin and Monnupuravir should be compared in randomized controlled clinical trials, and the possibility of their combination for anti-SARS-CoV-2 antiviral actions, explored further.”

The bottom line:

1. BOTH drugs show effectiveness in treating COVID-19.
2. Only Ivermectin is currently available to the general public for treatment of COVID-19, though you may have trouble getting your doctor to prescribe it as much ignorance and bias against Ivermectin exists about the drug by physicians.
3. The cost for twenty Molnupiravir capsules is $700 while the cost of one hundred 3mg tablets of Ivermectin is about $3. You read that right $700 versus $3!

Finally, Ivermectin has an excellent safety profile with only 5,693 adverse events with over 3.7 billion doses reported to the Vigiaccess database since 1992 (http://www.vigiaccess.org). For comparison, since there is no published data on the safety profile of Molnupirivir, the antibiotic Amoxycillin has 136,222 adverse events reported in the same database.

In order to make good treatment choices, we all need to be informed. After reading this, you probably know more about Ivermectin than your doctor.

Dr. Steve Troyanovich
Chiropractic Physician
Clinician Researcher
05 October 2021

Mini Review

Drugs Shown to Inhibit SARS-CoV-2 in COVID-19 Disease: Comparative Basic and Clinical Pharmacology of Molnupiravir and Ivermectin

Ajayi AAL*
Department of Medicine, Division of Hypertension and Clinical Pharmacology, Baylor College of Medicine, USA

***Corresponding author:** Ajayi AAL, Department of Medicine, Division of Hypertension and Clinical Pharmacology, Baylor College of Medicine, Houston TX 77030, USA

Received: July 10, 2021; **Accepted:** August 03, 2021; **Published:** August 10, 2021

Abstract

The pharmacology of anti-SARS-CoV-2 drugs, Molnupiravir (M) and repurposed Ivermectin (IV) were compared. The IC_{50} for the inhibition of viral replication were 0.3μM for M and 2.8μM for IV. Both drugs have good oral absorption, with M achieving peak plasma concentrations by 2 hours and IV by 5 hours. The plasma half life were 7 hours for M and 81-91 hours for IV. M inhibits viral replication inducing viral mutagenesis in RdRp, causing viral error catastrophe and viral extinction. IV affects viral cell entry, nuclear transport and inhibits replication *via* RdRp. IV has additional effect to suppress cytokine production through STAT-3 inhibition. M is a more potent antiviral drug and IV has a longer residence in the body. Their effects on RdRp and cytokine inhibition are potentially complimentary for anti-COVID-19 activity. Both IV and M should be compared in randomized controlled clinical trials, and the possibility of their combination for anti-SARS-CoV-2 antiviral actions, explored further.

Keywords: COVID-19; Antiviral therapeutics; Molnupiravir; Ivermectin; Combination