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Ivermectin And Sars Cov 2 Pandemic: The Right Time To Start As Evidenced By The Statistics Of The Pandemic

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Abstract

The ongoing pandemic has become the major challenge to all mankind. Since its very beginning, huge economic resources have been used in order to fight against it. But not always in the right direction. Repurposing drugs have proved to be more useful than recently investigated ones. Yet, they are not used in the massive and strong way they should be. More expensive doesn't mean better. There are currently 53 international trials on ivermectin, with 100 % of good outcomes. In this article, we review the evolution of IVM, from its early in vitro studies to our final Clinical Trials. Despite it, ivermectin keeps awaiting its turn to be included in WHO, NIH, NICE and other national and international guides.

Keywords: Ivermectin; SARS COV2; repurposing drugs

Introduction

Since its outbreak in China on December 2020, the SARS COV2 pandemic has already provoked over 2 million deaths. During 2020, huge efforts have been made worldwide to reduce the impact of this virus on public health. New compounds and repurposed drugs have been tried, with variable outcomes. One of the most promising results came from the use of ivermectin (IVM) [1, 2]. Ivermectin is an FDA-approved anti-parasitic agent which in recent years has shown to have in vitro anti-viral activity against a broad range of viruses, from dengue to recently-included SARS COV2 (Figure 1).

IVM is in a class of medications called anthelmintics. It is widely used for treating scabies, onchyloidosis and onchocerciasis. There are currently 53 international trials on IVM/SARS COV2, with 100 % of good outcomes, ranging from 2:1 reduction of death rate to 8:1, depending on methods, doses, time of application, etc. Despite its having been presented to all international Health Organizations, after a whole year of death and sorrow, it isn't still included in the potential arsenal against the disease. We summarize its effects, the way we investigated its efficacy, and the huge international literature that supports its potentially-beneficial massive use.

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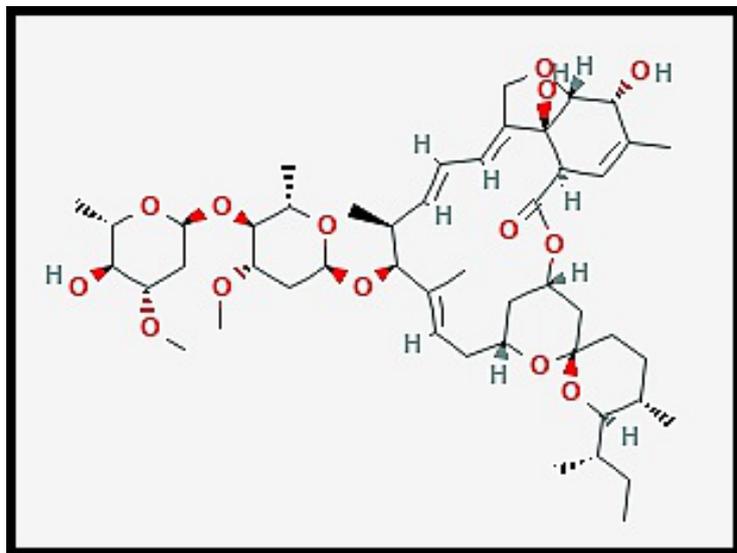


Figure 1: IVM Structure

Ivermectin and SARS COV 2, from in Vitro to in Vivo Studies

IVM is widely used in Human Medicine as an anti-parasitic compound. Its efficacy and safety have been proved worldwide. Its introduction by Omura and Campbell was awarded with the Nobel Prize. Since then, IVM has shown different aspects of activity on other microorganisms, such as virus (dengue fever, West Nile Encephalitis, etc) [1]. Caly and Wagstaff [2] proved the efficacy of ivermectin (IVM) to dramatically reduce viral load in a matter of 48 h. Those studies were held in vitro. We transferred the use of IVM to human beings 3,4,5,6,7 with equal results. Those results were duly submitted to the National Library of Medicine (USA), being the first ones in the world to be released. Since then, loads of evidence has been mounting in the same direction, but with scarce luck in order to attract the attention of international Health Organizations. Even locally, the Argentinian Health Authorities have failed to give IVM a preferential treatment. Those Professionals who have adhered to the use of IVM have, so far, saved thousands of human lives. IVM has become the silent, neglected silver bullet against SARS COV2. It can be used either for prevention or treatment. In the first situation (pre-exposure use), we prescribe 1 drop of IVM per kilogram of weight, on a weekly basis. So far, its efficacy in protecting subjects from contagion has ranged from 99 to 100 % [3]. For treatment, we suggest the following scheme (Table 1).

Disease Severity	Ivermectin	Corticoid		Ventilation
Confirmed Mild Case (and close contacts)	24mg orally at a dose of 300ug/kg in a single dose, to be repeated a week later.	No	Aspirin 250mg orally	No
Modrate Clinical Stage	35mg orally at a dose of 450ug/kg in a single dose, to be repeated a week later.	Dexamethasone 4 mg (parenteral)	Idem	Low Flow Oxygen or Oxygen Concentrator
Severe Case with Bilateral Pneumonia	48mg via gastric cannulae, at a dose 600ug/kg in a single dose, to be repeated a week later.	Idem	Enoxaparin 100 UI/kg (1 mg/kg)	Mechanical Ventilation

TABLE 1: Scheme of IVM as Treatment in COVID 19 Patients

The efficacy of treatment if compared to all other treatments- was 7:1 when considering mortality, in our series [4]. The mechanisms of action of IVM on SARS COV2 are summarized in Figure 2.

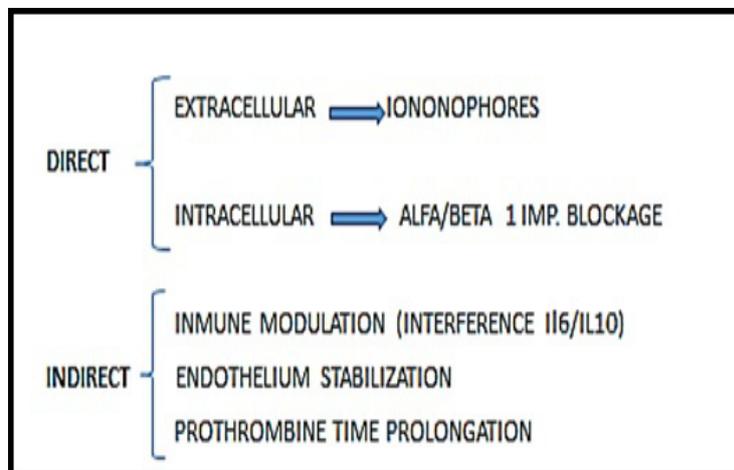


Figure 2: IVM MECHANISMS OF ACTION AGAINST SARS COV2

Discussion

Having performed a meta-analysis of the 35 international trials, the outcomes of which have already been submitted to the National Library of Medicine (USA), we have found that all of them have positive results. There are still on-going 18 Trials; but the chance of bias in the 35 finished ones is 1 in 4 billion, thus proving the efficacy of IVM on SRAS COV2, and the urgent need to include this compound in the list of international alternatives against the current pandemic.

Conclusions

As IVM is a worldwide attainable drug, with many years of use that stand for its safety, low cost all over the World, and many new and promising effects that have been proved beyond doubt, we strongly support its being used against SARS COV2 [5-7]. Every human life count; 2 million death is a massacre and –what is worse- an avoidable massacre. Up till now the scepticism of World Health Organizations has been paralyzing. But enough is enough. As A. Camus quoted [8], it is just a matter of common sense, and it only requires common decency.

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