



THE MERITS OF CQ/HCQ ON COVID-19

ABSTRACT

COVID-19, a disease that has brought the whole world to its feet, was first discovered in Wuhan China, in December, 2019. In no time, the disease traveled across different countries hence, was declared Pandemic, as well as a Public Health Emergency by the World Health Organization, WHO, on 11th March, 2020.

Africa, a continent known for its fragile health care and economy system with majority of its member states mainly the Sub-Saharan region ranked as a low-middle income states by OECD, has been of major concern to WHO, member of the states and other health authorities.

However, the first case of the pandemic reported in Africa was in Algeria, on the 25th of February, 2020.¹ Thus, the number of infected cases continue to increase in different country of the continent.

Definitely overtime, this viral disease has proven to be one that is not ready to disappear into the thin air anytime soon. Hence, the needs for Africa countries to start developing strategies that will immune her against the virus and help mitigate its spread and effects.

This article explains the use and effects of Pre-Exposure Prophylaxis, PrEP, and Post-Exposure Prophylaxis, PEP, in enhancing the mitigation of Coronavirus through Study Protocols Design with the inclusion of low income communities.

The prophylaxis is a combinatorial use of CQ/HCQ and Azithromycin. The COVID-19 response put in place in this article is affordable, sustainable, scalable and reliable. It also highlights the magical use of a quiet but impactful drug, Quinine....

INTRODUCTION

In Africa, the first case of coronavirus disease 2019 (COVID-19) was reported in 25 February, 2020 in Algeria.¹ All member states have since been affected with the exception of Lesotho where there have been no official reports of confirmed COVID-19 cases to date. The virus has spread to dozens of countries within weeks. Governments and health authorities across the continent are striving to limit widespread infection.²

As at May 19, 2020, a cumulative total of 64,388 confirmed COVID-19 cases with 64,091 confirmed and 297 probable cases has been reported across the 47 countries in the region with a total of 1,827 deaths (case fatality ratio 2.8%). The current status in Africa represents only 1.4% of the confirmed COVID-19 cases and 0.6% of deaths reported worldwide. Of the

47 countries, 11 have registered a total of 1,000 confirmed COVID-19 cases.

Algeria has recorded the highest mortality in the region, with 561 deaths, followed by South Africa with 312, Nigeria (192), Cameroon (140), Democratic Republic of Congo (60), Chad (56), Niger (55) and Mali (53). The highest case fatality ratios were observed in eight countries with 200 cases or more; Chad (10.3%), Liberia (9.9%), Algeria (7.6%), Burkina Faso (7.0%), Sierra Leone (6.2%), Niger (6.0) and Chad (5.9).³

STUDY PROTOCOLS

LiveWell Initiative, LWI, research team led by Bisi Bright, designed study protocols to help Africa respond effectively to the COVID-19 Pandemic.

This study protocol which recommends the use of CQ/HCQ and Azithromycin has been undergoing adaptive clinical trials in different states both in Nigeria and outside Nigeria with feedback of recovery from COVID-19, by our team of researchers at LiveWell Initiative, LWI, partnering with other research institutions like Kaduna State, Oyo State isolation Center and a few private health institutions.

The study protocols advise on the right prophylaxis doses of CQ/HCQ that should be used together with Azithromycin for Health Workers, Low-income communities, Uninfected and Self-isolated persons.

Kaduna and Bauchi states in Nigeria adopted these protocols for trials after Hypothesis Testing and Health Researchers debates in closed communities.⁴ On Wednesday, May 27, Africanews published the statement of the Director General of NAFDAC, Mojisola Adeyeye, approving that the country should proceed with trials on CQ.⁵ This was in response to WHO declaration which says it is temporarily halting the use of HCQ to treat COVID-19 patients over published concerns that the drug may do more harm than good.⁶

She said, "But I don't think we have data from the African population yet, because our genetic makeup is different," she added. Lagos State had announced last week that trials were to start with the anti-malarial drug.⁵

CYTOKINE STORM AND CQ/HCQ - QUININE TO THE RESCUE!

It has been discovered that the mechanism of action of this viral disease involve the stimulation of cytokine storm. Cytokine storm is the excessive release of cytokine by the immune cells into the blood stream, hence, results in hypoxia. Hypoxia is a condition that deprives the lungs of oxygen, thus resulting in breathing difficulty.⁷



CQ/HCQ are 4-Aminoquinolines but they cannot cross the Blood Brain Barrier; so Quinine will similarly interfere with lysosomal activity and autophagy, interact with membrane stability and alter signalling pathways and transcriptional activity, which can result in inhibition of cytokine production and modulation of certain co stimulatory molecules.⁸ In addition it will prevent the Haemozoin activity and so the viruses will not have access to the food vacuoles which are dead blood cells, so they will be attenuated!

ANTIVIRAL ACTIVITY OF CQ/HCQ and QUININE

CQ/HCQ are also well known for their antiviral property.

Martin, J et al. (2005), reported that chloroquine has strong antiviral effects on SARS-CoV infection of primate cells. These inhibitory effects are observed when the cells are treated with the drug either before or after exposure to the virus, suggesting both prophylactic and therapeutic advantage. In addition to the well-known functions of chloroquine such as elevations of endosomal pH, the drug appears to interfere with terminal glycosylation of the cellular receptor, angiotensin-converting enzyme 2. This may negatively influence the virus-receptor binding and abrogate the infection, with further ramifications by the elevation of vesicular pH, resulting in the inhibition of infection and spread of SARS CoV at clinically admissible concentrations.⁹

Chloroquine exerts direct antiviral effects, inhibiting pH-dependent steps of the replication of several viruses including members of the flaviviruses, retroviruses, and coronaviruses. Its best-studied effects are those against

HIV replication, which are being tested in clinical trials. Moreover, chloroquine has immunomodulatory effects, suppressing the production/release of tumour necrosis factor α and interleukin 6, which mediate the inflammatory complications of several viral diseases. We review the available information on the effects of chloroquine on viral infections, raising the question of whether this old drug may experience a revival in the clinical management of viral diseases such as AIDS and severe acute respiratory syndrome, which afflict mankind in the era of globalization.¹⁰

- Quinine elucidates all the same effects, with potentiating, enhanced solubility and enhanced membrane permeability.

CONCLUSION

As Africans, it is high time we started trusting and exploring our homegrown initiatives, to make use of what works best for us.

We shouldn't continue to rely on the developed countries to work our way through. They became developed because they are confident in themselves. LWI study protocols using CQ/HCQ together with Azithromycin has been testified of within Nigeria, Canada, United Kingdom, etc.

For our low-middle income status, these protocols are scalable, affordable, sustainable and effective and **are strictly recommended for use by Physicians, Researchers, and Pharmacists only.**

LWI takes no responsibility for the outcomes of the use or testing of the Protocols.

Thank you.

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